ZUCKERBERG
SAN FRANCISCO GENERAL
Hospital and Trauma Center

ENVIRONMENT OF CARE

ANNUAL REPORT

FY 2016-2017

Approvals

Environment of Care Committee: September 28, 2017
Nursing Executive and Patient Care Services Committee: (Scheduled October 18, 2017)
Medical Executive Committee: (Scheduled October 19, 2017)
PIPS Committee: (Scheduled October 25, 2017)
Joint Conference Committee (Scheduled October 24, 2017)
San Francisco Health Commission (Scheduled November 21, 2017)

SF HEALTH NETWORK
SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

INTRODUCTION

The goal of the Environment of Care (EOC) Program is to provide a safe, functional and effective environment for patients, staff and visitors. The EOC Program encompasses the following seven programs/areas:

- Safety Management (Ed Ochi, Safety Officer)
- Security Management (Basil Price, Director of Security, Department of Public Health)
- Hazardous Materials and Waste Management (Mike Harris, Senior Industrial Hygienist)
- Emergency Management (Lann Wilder, Director of Emergency Management)
- Medical Equipment Management (Jose Sanchez, Manager, Biomedical Engineering)
- Life Safety Management (Greg Chase, Facilities Services Director)
- Utilities Management (Greg Chase, Facilities Services Director)

The EOC Program is managed by the EOC Committee. The EOC Committee is a multi-disciplinary group which is focused on the continuous improvement of the Environment of Care.

Activities of the Environment of Care Committee include:

- Identifying risks and implementing systems that support safe environments
- Working to ensure that hospital staff are trained to identify, report and take action on environmental risks and hazards
- Setting and prioritizing the hospital's EOC goals and performance standards and assesses whether they are being met
- Working to ensure the hospital is compliant with the EOC-related requirements of all applicable regulatory bodies

Membership of the EOC Committee is comprised of:

- Program managers for each of the seven EOC Management Programs (as listed above)
- Representatives from Nursing (Andrea Chon), Infection Control (Elaine Dekker), Clinical Laboratory (Andy Yeh), Pharmacy (Julie Russell), Environmental Services (Francisco Saenz), Department of Education (Kala Garner), and Quality Management/Patient Safety (Tom Holton)

EOC projects and initiatives include opportunities for improvement identified during ongoing hazard surveillance, risk assessment and other EOC activities to promote a culture of safety awareness.

As of October 2016, Ed Ochi, Greg Chase, and Cheryl Kalson serve as Co-Chairs of the Environment of Care Committee

The EOC Annual Report highlights the activities of the EOC Program during Fiscal Year 2016-2017. For each of the major areas, it is organized as follows:

- Scope
- Accomplishments
- Program Objectives
- Performance Metrics
- Goals and Opportunities for Improvement

SAFETY MANAGEMENT

SCOPE

Safety Management is designed to identify and address potential safety risks in the ZSFG environment. At ZSFG, Safety Management is shared by two complimentary programs, Patient Safety and Environmental Health and Safety:

- Patient Safety is a function of Quality Management and oversees the organization's patient safety plan and national patient safety goals. Patient Safety reports via Process Improvement and Patient Safety Committee (PIPS).
- Environmental Health & Safety (EH&S) focuses on staff health, safety, and well-being. The EH&S Department within Quality Management provides consultation, resources and training to create, maintain and improve the hospital's working environment. Their goal is to reduce or eliminate staff injuries and illnesses, and create a safe environment for all persons including staff, patients, clients, and visitors at the ZSFG site. EH&S reports their activities through the Environment of Care Committee in both this chapter and the Hazardous Materials and Hazardous Waste Chapters.

The Safety Management Program's scope encompasses all departments and areas of the ZSFG campus, except for UCSF research activities, which fall under the purview of the UCSF management including their Environmental Health & Safety program. To provide a complete picture of Safety Management at ZSFG, a summary of Patient Safety activities is included as an attachment to this Section of the Environment of Care Committee's Annual Report, with the full report being available in the Performance Improvement and Patient Safety (PIPS) meeting minutes. The balance of this report focuses on EH&S activities.

ACCOMPLISHMENTS

- Supported ZSFG in a successful transition to B25, and in passing State Licensing, Joint Commission Accreditation, and Hazardous Materials/Hazardous Waste registration inspections without major health and safety issues.
- Using the A3 management process, prepared a Strategic (organization-level) A3 for reducing staff injuries. Working interactively with the SFDPH Occupational Safety and Health (OSH) Section to improve the quality of injury data to allow for comparisons with published data for similar-sized and function hospitals nationwide.
- Using injury data to provide prioritization and focus to employee health and safety initiatives. Using more in-depth data from the SFDPH Bloodborne Pathogen Exposure / Sharps Injury log, working with UCSF management on site in joint efforts to reduce bloodborne pathogen exposures, particularly from sharps injuries on the ZSFG Campus across employer lines.
- Completed a total of 126 computer workstation evaluations as well as a total of 112 chair fittings. Established a standardized ergonomic equipment catalog and negotiated pricing on task chairs that resulted in an 18% savings per chair. With the support of ZSFG Department of Education and Training (DET) created and implemented the Ergonomics Training Video that is currently viewed during New Employee Orientation. Based on staff injury data, began expanding the monthly "Ergonomic Tips" bulletins beyond workstation ergonomics to address body mechanics, such as safe lifting and materials handling *(sample attached)*.
- Worked closely with ZSFG Capital Projects Integration (i.e. Rebuild and 2016 Public Safety Bond), Facilities, and Infection Prevention and Control to manage construction projects in

close proximity to staff, patients, and visitors.

PROGRAM OBJECTIVES FOR FY 2016-2017

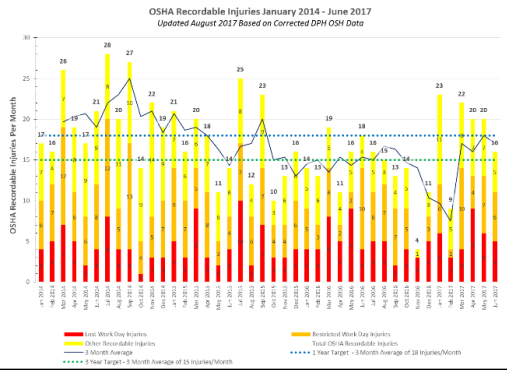
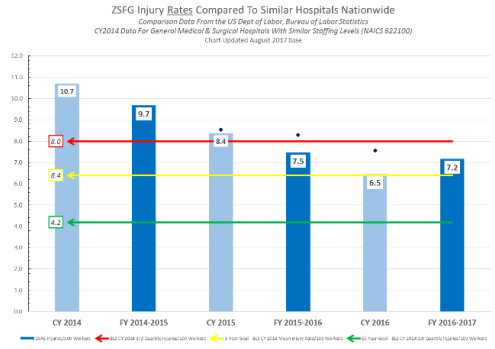
Objectives	Met / Not Met	Comments and Action Plans
Safety: Reduce the number of staff injuries.	**Met**	See Performance Metrics - Objectives & Performance Indicators Element 1 for details.
Safety: Overhaul the hospital's Injury and Illness Prevention Program with the goal of creating an environment where safety reviews are included in all work activity planning.	**Partially Met**	See Performance Metrics - Objectives & Performance Indicators Element 2 for details.
Safety: Partner with Security and Nursing to respond to forthcoming Cal/OSHA regulation addressing violence prevention in healthcare. Draft regulations require the preparation of a workplace violence prevention program, as well as reporting of workplace violence related injuries to Cal/OSHA at the time of the incidents.	**Partially Met**	Planning continues with Security, the Sheriff's Department, Regulatory Affairs and Nursing to develop a sustainable reporting model. See Security Management Report for information regarding staff violence prevention (safety) training.
Safety: Systematically assess workflows and processes in Building 25, and update training, reference materials and monitoring tools to match workflows and processes.	**Partially Met**	Workflows and processes in Building 25 took longer to stabilize than anticipated and are actually still evolving. Educational and reference material being disseminated as needs are identified. Objective continued forward to FY2017-2018.
Safety: Update tools used by subject area experts on Environment of Care rounds.	**Met**	See Performance Metrics - Objectives & Performance Indicators Element 4 for details.
Financial Stewardship: Prepare tools for unit managers to incorporate the funding of ergonomic equipment into their FY 2017-2018 budgets. Following the model used for task chairs, develop standardized lists of equipment, purchased through a single vendor, to allow for economy of scale in equipment purchases.	**Met**	See Performance Metrics - Objectives & Performance Indicators Element 3 for details.

Developing People: Expand the skills and knowledge of the Ergonomics Program Coordinator (EPC) to address a broader spectrum of injury prevention and safety activities. Complete orientation and handoff of hazardous materials and hazardous waste duties to the new Senior Industrial Hygienist.	**Met**	EPC completed Cal/OSHA injury investigation training course to gain better insights on goals and expectations for incident investigations. EPC using injury data to expand Ergonomics Tips beyond computer workstations to address body mechanics such as safe lifting and materials handling *(sample attached)*. Senior Industrial Hygienist has assumed hazardous materials and waste duties and is successfully taking the lead on many construction projects.
An annual evaluation of the scope, objectives, key performance indicators, and the effectiveness of the Safety Management plan and programs is conducted.	**Met**	Completed via this document.

The Environment of Care Committee has evaluated these objectives for the Safety Management Program and determined that they have been met.

PERFORMANCE METRICS

The following metrics provide the Environment of Care Committee with information needed to evaluate performance of the Safety Management Program activities and to identify further opportunities for improvement:

Objectives & Performance Indicators	Results
AIM: By 6/30/17 reduce staff "Cal/OSHA recordable injuries" from the current average of 21 injuries per month, to an average of 18 injuries per month. 	**Met:** At end of FY2016-2017, the three month average of injuries was 17 injuries per month. The standardized injury <u>rate</u> ("Incidence Rate") shows progress towards the five-year goal of reducing the rate to the US Department of Labor, Bureau of Labor Statistics 2014 mean incidence rate of 6.4 injuries per 100 worker-years. 

AIM: Overhaul hospital's Injury and Illness Program (Environment of Care Policy 15.01) to better embrace the ZSFG True North metric of Staff Safety.	**Partially Met:** Revision of ZSFG Injury and Illness Program (IIPP, EOC Policy 15.01) drafted. Revision placed on hold to accrue further experience and determine how best to align the IIPP with the hospital's Reducing Staff Injuries Strategic A3.
AIM: Prepare budgeting tool for unit managers to budget ergonomic equipment into their annual budgets.	**Met:** Budgeting tool based on equipment life-cycles developed. Tool test-deployed as part of ZSFG Cost Center Manager's FY 2017-2018 budget package, with results being reviewed for further tuning of budget tool.
AIM: Overhaul EOC Rounds Tools Used by Subject Area Experts during EOC Rounds.	**Met:** Subject Area Experts for developed and are using new simplified rounds worksheets. Worksheets contain standardized codes for frequently identified issues allowing statistics to be compiled.

EFFECTIVENESS

Effectiveness is based on how well the goals are met and how well the scope of the performance metrics fit current organizational needs. Recognizing the significant changes and challenges presented by occupancy of Building 25, and the reorganization of Environmental Health and Safety, the Environment of Care Committee has reviewed the Safety Management Program and found it to be effective.

GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2017-2018:

- Safety: Continue efforts to reduce the number of staff injuries. See Proposed Performance Metrics for 2017-2018 for additional details.
- Safety: Continue to identify and develop countermeasures for activities and areas where significant numbers of staff injuries occur.
- Safety: (Continuation from previous Fiscal Year) Systematically assess workflows and processes in Building 25, and update training, reference materials and monitoring tools to match workflows and processes.
- Safety: Work with Nursing leadership and the Department of Education and Training to PDSA methods for training managers and supervisors the basics of injury (incident investigation).
- Financial Stewardship: Develop "sustainable" model for ergonomic equipment funding.
- Developing People: Provide coaching and resources to allow Ergonomics Program Coordinator to take the lead on and successfully develop a sustainable model for ergonomic equipment funding. Transition Radiation Safety Officer duties to Senior Industrial Hygienist and involve Senior IH in safety activities to expand experience base.

The proposed performance metrics for these goals are:

Safety Management Proposed Performance Metrics for 2017-2018	Target	Comments & Action Plan
AIM: Show continued progress in reducing staff injuries and injury rates.	**No Increase in Recordable Injury Counts or Injury Rates from FY2016-2017**	Goals and Targets from Reducing Staff Injury Strategic A3 include: • The reduction in recordable injuries to 15/month in by June 2019. • Bringing injury (incidence) rates towards the US Dept of Labor, Bureau of Labor Statistics 2014 mean for similar hospitals in 5 years.
AIM: Initiate no less than two initiatives specifically targeted at reducing staff injuries.	**>Two Initiatives**	Focus on high injury rate activities and workgroups.
AIM: Working with ZSFG Finance and Administration, engage in PDSA to develop a "sustainable" financial model for office ergonomic equipment .	**PDSA Cycle Completed**	Ergonomics Program Coordinator to take the lead in developing model.
AIM: Working with Nursing leadership, engage in PDSA to develop injury/incident investigation training for unit managers.	**PDSA Cycle Completed**	Focus on completion of existing Supervisor's Incident Investigation Report with sufficient information for managers to implement injury countermeasures.

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Environmental Health & Safety

Ergonomic Tips

Bulletin #20, May 2017

May the Lift Be With You!

Remember These Tips When Lifting

1. Lifting: Keep your back as straight as possible. Stand with your knees slightly bent and feet shoulder-width apart.

Bend at the knees and hug the object close to you. Lift straight up using your legs.

Avoid lifting with your back!

2. Power Zone: Keep the item close to your body, between mid-chest and mid-thigh height.

This zone allows you to lift/carry the most with the least amount of effort.

Avoid carrying an object out of the power zone!

Continued on page 2.

Scott Thomas 5/19/2017, v1.0

3. Golfer's Lift: Lift one leg off the ground while bending at the opposite hip, placing your body parallel to the floor. Then reach out with one hand to pick up the object.

Use other hand to hold on to a stationary object, like a table. This will help stabilize you.

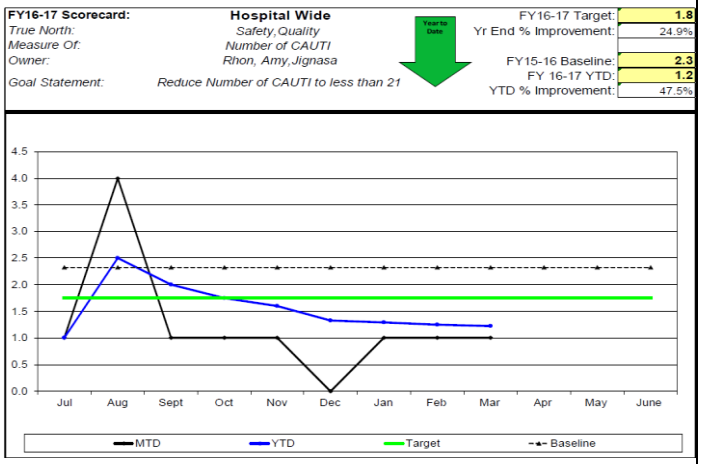
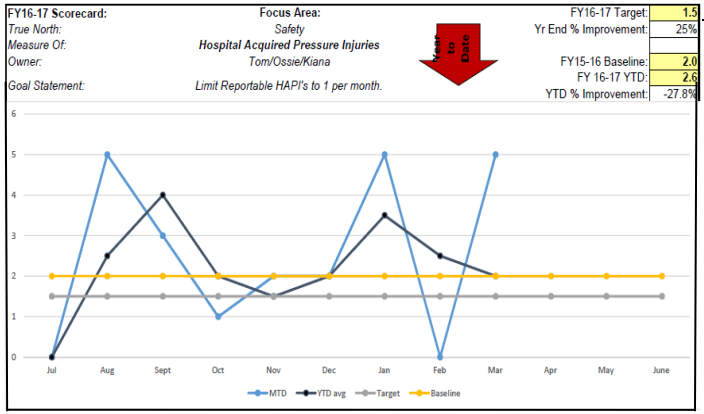
The Golfer's Lift is useful when lifting an item out of a bin or for picking up small objects off the floor.

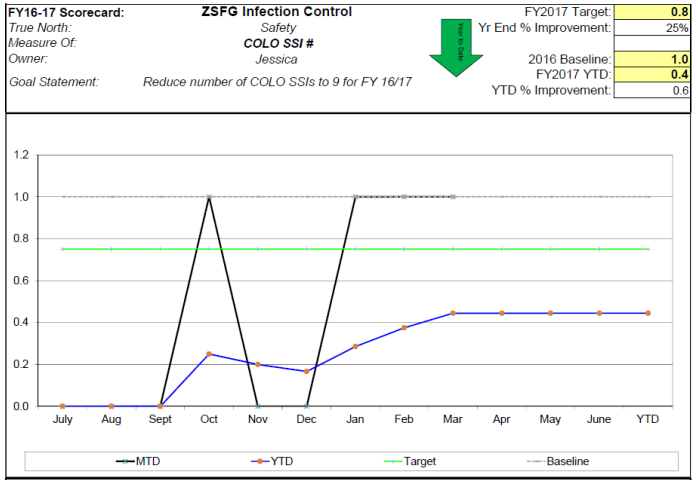
DO NOT use the Golfer's Lift for heavy objects!

For additional information contact: Scott Thomas, Ergonomics Program Coordinator x67492, SFGH.Ergonomics@sfdph.org

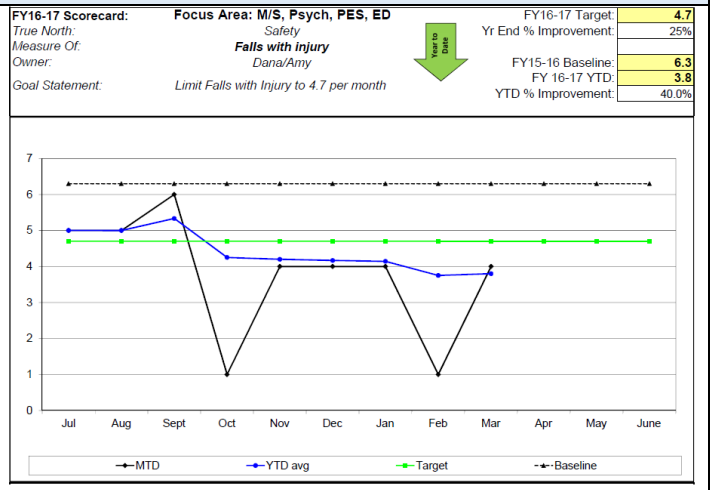
Scott Thomas 05/19/2017, v1.0

Zuckerberg San Francisco General Hospital and Trauma Center
Patient Safety Plan Review
Hospital Acquired Infections (HAI), Hospital Acquired Conditions (HAC), National Patient Safety Goals (NPSG), and Patient Safety Programs
June 2017, PIPS

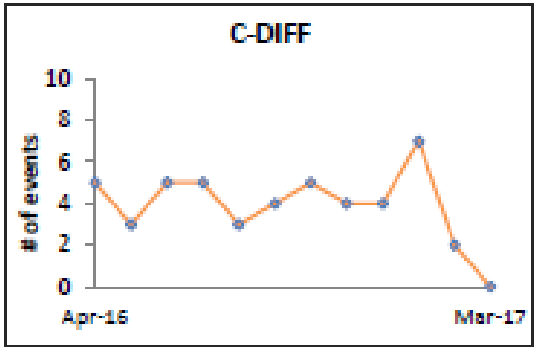
Initiative	Aim/Goal	Action	Results
Hospital Acquired Infection (HAI) - Driver Metrics			
Catheter Related Urinary Tract Infections (CAUTI) **NPSG 07.06.01**	Goal: 25% reduction 15/16 Baseline: 2.3/Month FY 16/17 Target: 1.8/Month FY 16/17: 1.2/Month 47.5% Reduction	**Accomplishments:** -The MICU team implemented a daily assessment and documentation of the indication of the indwelling urinary catheter in August 2016 in their Salar template. Since that time, H32/38 MICU has not had any CAUTI in past 10 months. **Challenges:** -Spreading to other services **Current Improvement Efforts:** -MICU daily assessment and documentation of the indication of the catheter, exploring if it would be possible to spread this assessment to other services. -Testing weekly CAUTI round in critical care- Nurses are engaged and advocating for early removal of catheter or use alternative catheters - Active trial of external female catheters in process.	
Hospital Acquired Pressure Injuries (HAPI) **NPSG 14.01.01**	Goal: 25% reduction 15/16 Baseline: 2/Month FY 16/17 Target: 1.5/Month FY 16/17: 2.6/Month -27.8% Reduction	**Accomplishments:** - Began monthly multidisciplinary meeting to discuss specific patient care issues and to reevaluate the algorithm for coverage, partnering with wound clinic to assist with coverage. - Developed standard work for planned and unplanned absences. **Challenges:** -Bedside nurse representation **Current Improvement Efforts:** -Improving handoff process for reporting on skin using the Braden scale to describe the skin condition in more detail. - Multidisciplinary team met for the first time on June 13, 2017.	

Surgical Site Infection (SSI) **NPSG 07.05.01**	Goal: 25% reduction 15/16 Baseline: 1.0/Month FY 16/17 Target: 0.8/Month FY 16/17: 0.4/Month 0.6% Reduction	**Accomplishments:** -From July 2016 to March 2017, there have been 4 SSI's in patients undergoing Colon procedures, which is a 60% improvement YTD. **Challenges:** Surgeon schedules and staff rotations make it difficult to meet with surgeons to discuss and engage in improvement efforts. **Current Improvement Efforts:** -Beginning in January 2017, CHG wipes are being provided to patients with scheduled surgical procedures in order to facilitate patient bathing prior to surgical procedures. -This is also being rolled out to the inpatient units to increase patient bathing the night before the surgical procedure.	

Zuckerberg San Francisco General Hospital and Trauma Center
Patient Safety Plan Review
Hospital Acquired Infections (HAI), Hospital Acquired Conditions (HAC), National Patient Safety Goals (NPSG), and Patient Safety Programs
June 2017, PIPS

Initiative	Aim/Goal	Action	Results
Hospital Acquired Conditions (HAC) – Driver Metric			
Falls with Injury **NPSG 09.02.01**	Goal: 25% reduction 15/16 Baseline: 6.3/Month FY 16/17 Target: 4.7/Month FY 16/17: 3.8/Month 40% Reduction	**Accomplishments:** -Using a three phase approach: • Phase I – Improve accuracy of assessment and communication of falls risk. • Phase II – Standardize falls risk i.e.: Universal falls risk vs. high falls risk. • Phase III – Post fall management and feedback. -Falls with injury rates sustained below target for 9 months. -New multi-language signs tested on H62/64 have spread to other med/surg units **Challenges:** -Bedside nurse participation. **Current Improvement Efforts:** -Small team from H76/78 working on purposeful rounding during peak fall times. -All med/surg units now have chair alarms.	

Zuckerberg San Francisco General Hospital and Trauma Center
Patient Safety Plan Review
Hospital Acquired Infections (HAI), Hospital Acquired Conditions (HAC), National Patient Safety Goals (NPSG), and Patient Safety Programs
June 2017, PIPS

Initiative	**Aim/Goal**	**Action**	**Results**
National Patient Safety Goals – Driver Metric			
Clinical Alarms **NPSG 06.01.01**	Staff can speak to the clinical alarm policy on specified unit 90% of the time.	**Accomplishments:** -Imbedded unit specific policy into Clinical Alarm policy. -Added Clinical Alarms to the #1 question for TJC tracers. **Challenges:** Staff has some difficulty speaking to the level of alarms and the time frames regarding a high, moderate or low level alarm response. **Current Improvement Efforts:** -All QM staff actively completing tracers on a weekly basis with the added clinical alarm question since March 2017.	Having this on the tracer tool has provided the opportunity to educate management and staff on the clinical alarm policy.
Initiative	**Aim/Goal**	**Action**	**Results**
Hospital Acquired Infection (HAI) Watch Metrics			
Clostridium Difficile (CDI) **NPSG 07.03.01**	Reduce FY 2015 rate for HO-CDI illness: 1 Year = 25% (.51 cases per 1000 pd's) 3 Year = 50% (.34 cases per 1000 pd's)	**Accomplishments:** -Patients with a history of CDI who are at risk for recurrence are being treated with oral Vancomycin prophylaxis in order to prevent CDI recurrence. **Challenges:** -It is difficult to regularly assess equipment and room cleaning. **Current Improvement Efforts:** - Daily check of the list of newly admitted patients to look for patients with a history of previous CDI. -Development of standard work for isolation supply cart turnover. -Developing a hand hygiene A3.	

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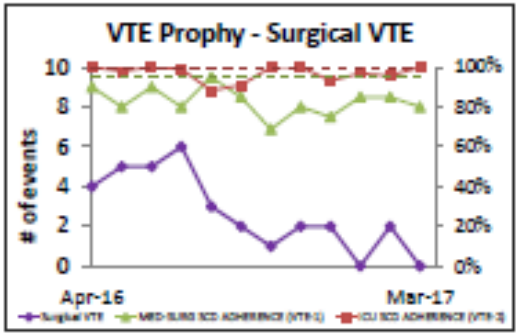
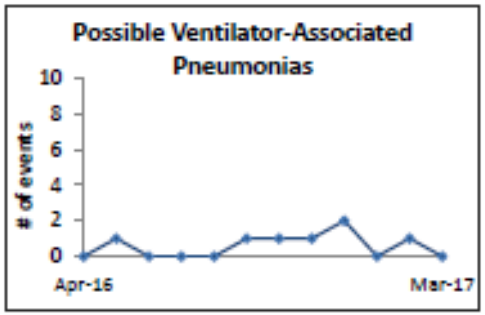
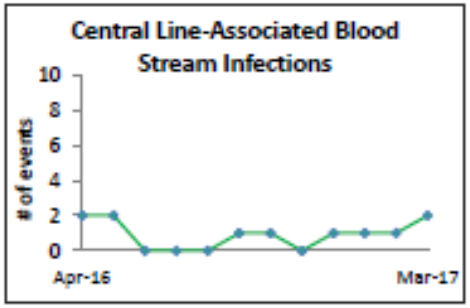
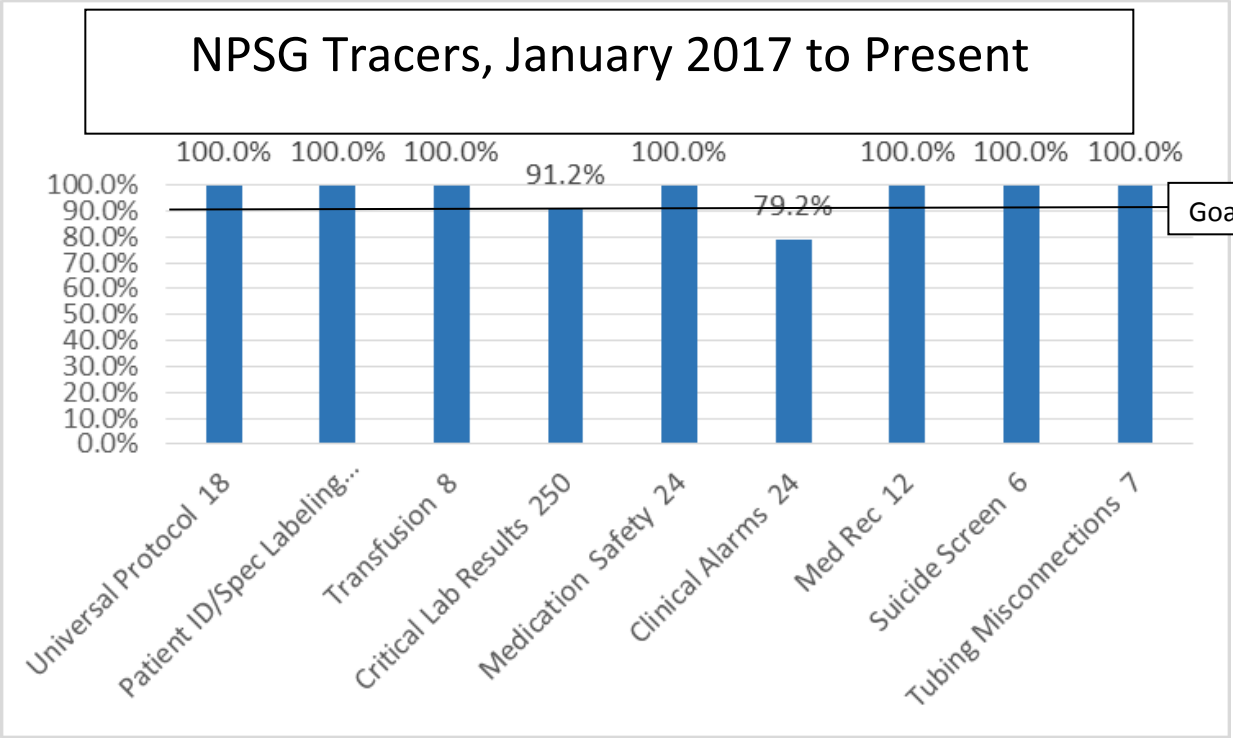
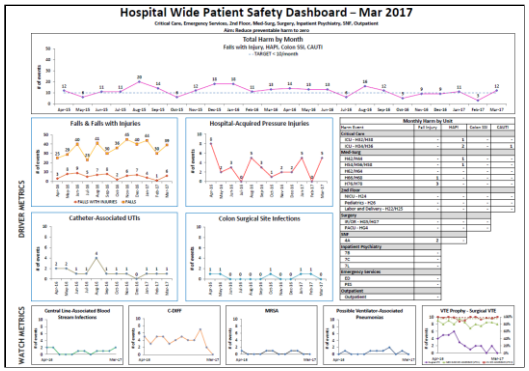
June 2017, PIPS

Venous Thromboembolism Prevention (VTE) **NPSG 03.05.01**	-VTE-1 Increase compliance of SCD to 96% in Med-Surg -VTE-2 Increase compliance of SCD to 100% in ICU -Reduce PSI-12 to match best decile O/E(AHRQ) 1 – year = 6 3 – Year = 4	**Accomplishments** -Successfully implemented New SCD machines to be available in every room in ICU and Med-Surg units. - SCD compliance rate is 100% in ICU since Feb 2017 **Challenges:** -Sometimes SCD machines are not always kept in the patient room- when transferring pt. to another unit or when not in use, they are placed in the closet or taken to the dirty utility room. **Current Improvement Efforts:** -Real time weekly audits/ education with staff on importance of VTE and SCD usage in med-surg.	
Possible Ventilator Associated Pneumonia (VAP)	Maintain Zero incidents of VAP for fiscal year 2016/2017	**Accomplishments:** -Increased use of adaptive strategies such as targeted light sedation and early mobilization. **Challenges:** -Definitions used by NHSN have changed making it appear as if we had an increase in VAP's. **Current Improvement Efforts:** -Using more non-invasive ventilation and high-flow nasal cannulas as standard practice, reducing the use ventilators.	

Central Line Associated Blood Stream Infections (CLABSI) **NPSG 07.04.01**	While the ultimate goal is to have 0 CLABSI, specific goals were established by CMS. SFGH CY 2015 overall goal is to decrease 2016/17 rate of CLA-BSI by 25% at a minimum for each individual category – ICU and Non-ICU. .	**Accomplishments:** -Continue to have an active and engaged CLABSI team. -ED is adding Curos cap education to their annual education day to improve use. **Challenges:** -ED should be placing them on patients who are boarding or being admitted. **Current Improvement Efforts:** -Adding Curos cap compliance audits to the CalNoc biannual surveillance day.	
Initiative	**Aim/Goal**	**Action**	**Results**
Hospital Acquired Conditions (HAC) – Watch Metrics			



Initiative	Aim/Goal	Action	Results
Patient Safety Programs			
Culture of Safety Survey	Administer the Culture of Safety Survey every two years.	**Accomplishments:** - AHRQ culture of safety survey ran from February 6th to March 13th, 2017. -Achieved a solid 30% response rate.	All department heads have been provided a presentation of their areas, along with detailed reports. Each department will have provided this information to their own staff by July 30, 2017. A plan of the one thing they will work on this year to improve our scores is due July 30, 2017. Improvement plan update to report on progress will be due September 1, 2017 and March 1, 2018. This is being tracked and will be presented to the executive team on a regular basis.

		Challenges: -Participation of staff and providers has been a challenge. **Current Improvement Efforts:** -Development of communication plan. -Roll out plan for improvement.	
Patient Safety Harm Dashboard	Update Harm dashboard monthly and post on nursing units.	**Accomplishments:** -Developed a new format for the Harm Dashboard that highlights the 4 drivers. -Had our first Zero Hero awards in January to celebrate those units who had zero harm events for the last quarter of 2016. The first quarter of 2017 is planned for June. **Challenges:** -Timely data collection **Current Improvement Efforts:** -Patient Safety team rounds on a regular basis to huddle with staff regarding the harm dashboard.	 **Zero Hero Awards Last Quarter 2016:** H62/64 Med/Surg H54/56 Med/Surg H66/68 Med/Surg H32/38 Critical Care **Zero Hero Awards Quarter 1, 2017** H32/38 Critical Care H34/36 Critical Care H42/44 Med/Surg H54/56/58 Med/Surg H62/64 Med/Surg H66/68 Med/Surg 7B, 7C, 7L, PES Psych(Quarterly)

Zuckerberg San Francisco General Hospital and Trauma Center

Security Management Plan Assessment

2016-2017 Annual Environment of Care Plan Review

References:
Joint Commission Accreditation Manual for Hospitals, Environment of Care Standards, EC.02.01.01
California Code of Regulations, Title 8, Sections 8 CCR 3203 *et seq.*
California Code of Regulations, Title 22, Sections 22 CCR 70738
Health & Safety Code, Section 1257.1, 1257.8

I. SCOPE:

The scope of the Security Management Plan is to assure the ongoing provision of a safe, accessible, and secure environment for staff, patients, and visitors at Zuckerberg San Francisco General Hospital Campus. To that end, it is the overall intent of this plan to establish the framework, organization and processes for the development, implementation, maintenance, and continuous improvement of a comprehensive Security Management Program. This program is designed to provide protection through appropriate staffing, security technology, and physical barriers.

The scope of the Security Management program include:

- Continuous review of physical conditions, processes, operations, and applicable statistical data to anticipate, discern, assess, and control security risks, and vulnerabilities
- Ensure timely and effective response to security emergencies
- Ensure effective responses to service requests.
- Report and investigate incidents of theft, vehicle accidents, threats, and property damage
- Promote security awareness and education
- Enforce various hospital rules and policies
- Establish and implement critical program elements to include measures to safeguard people, equipment, supplies, medications, and traffic control in and around the hospital and the outlying medical offices.

Each management objective is listed in the table below, and is marked as met or not met. If an objective is not met, the DPH Director of Security will review the objective, and develop a corrective action plan.

II. ACCOMPLISHMENTS:

- Implementation of the New Employee Orientation, Security Services Presentation. DPH Security Services and the San Francisco Sheriff's Department jointly present to new employees information regarding the services provided by the Sherriff's Department, Security Resources, reporting security incidents, Photo ID Badge Policy, Threats and the Workplace Violence Policy. .

- Implementation of Non-Violent Crisis Intervention Training, including the certification of 10 ZSFG nursing and sheriff's deputies as Crisis Prevention and Intervention Instructors. The instructors have embarked on a mission to train 6,000 patient care providers by April 2018 to comply with the Cal/OSHA Violence Prevention in Health Care Standards.

- Code Silver – Active Shooter Training was provided to over 1,000 ZSFG employees.

- The ED Security Weapons Screening Process resulted in confiscation of 3,934 weapons and contraband.

- Responded to 22,000 service calls, including over 4,000 calls to provide patient/medical assist services, patient standby, and patient restraint support.

- Proving Special Event Security for 12-on-campus events with zero incidents. The security plan included coordinating with Federal and Local Executive Protection Teams, conducting crowd management, and managing media relations.

- Achieve 100% compliance in all elements of the SFDPH and SFSD MOU. In each of the monthly security provider performance surveys (SPS), the San Francisco Sheriff's Department exceeded the overall performance target.

- During 2016-2017, a total of 324 customers, representing hospital patients, and visitors were surveyed regarding Security Services. Feedback from 99% of the surveys rated their experience as being satisfactory, which exceeded the performance target for quarters 1-3.

- Reported serious incident crimes decreased 5% from 2015-2016 (22% decrease since 2014.)

- Use-of-force incidents decreased by 31% from 2015-2016.

III. PROGRAM OBJECTIVES:

Objectives	Met / Not Met	Comments and Action Plans
An annual review of the physical conditions, processes, operations, and applicable statistical data is conducted to anticipate, discern, assess, and control security risks, and vulnerabilities. A security management plan is developed, and monitored, quarterly to address security vulnerabilities, and minimize risk.	Met	A 2016-2017 security risk assessments was completed, and the security risks, vulnerabilities, and sensitive areas were identified and assessed through an ongoing facility-wide processes, coordinated by the DPH Director of Security, and hospital leadership. These processes were designed to proactively evaluate facility grounds, periphery, behaviors, statistics, and physical systems.
Ensure timely and effective response to security emergencies, and service request, including the enforcement of hospital rules and policies.	Met	The daily AOD reporting documents, and crime statistic reports support the effectiveness of security response to security emergencies, and service request.
Report and investigate incidents of theft, vehicle accidents, threats, and property damage.	Met	Through quarterly law enforcement (SFSD) reports, and Unusual Occurrence reports, investigations are initiated for all crimes against persons and property.
Promote security awareness and education	Met	Through Environment of Care rounds, employees are provided security awareness training. Other security awareness and education programs include: Non-violent Crisis Intervention, and Security Alert publications.
Establish and implement critical program elements to include measures to safeguard people, equipment, supplies, medications, and traffic control in and around the hospital and the outlying medical offices.	Met	The Director of Security in partnership with the contract security provider, San Francisco Sheriff's Department, collaboratively establishes, and maintains communication and mutual ownership for outcomes, identification and troubleshooting of emergent safety concerns.

These objectives were reviewed and evaluated. They were found to be effective and will remain unchanged in 2017-2018. Additional program objectives will include addressing Cal/OSHA 3342. Violence Prevention in Health Care.

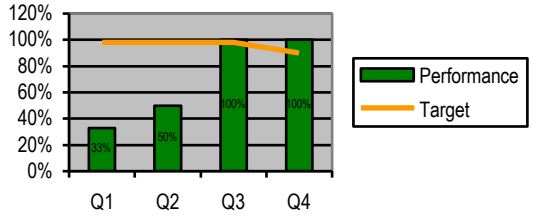
IV. PERFORMANCE:

Three performance metrics were selected for Zuckerberg San Francisco General Hospital in 2016-2017: SFSD Response to Code Green "At Risk" Patient began in during the 4th Quarter. Quarter's 1-3 measured the hospitals response to Code Green "At Risk," which is now monitored by the Code Green Committee.

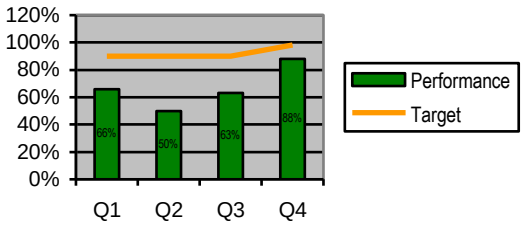
Additional performance metrics include: Customer Satisfaction, and Electronic Security System Functionality. The performance measures were as follows:

Code Green, "At Risk" Patient Alert Response Drills	**Q1**	**Q2**	**Q3**	**Q4**
Performance Metric: The contract security provider will be measured on their ability to effectively respond i.e. initial perimeter search, and notification of SFPD, BART, and MUNI as applicable, and documenting the search activity: **Response-rate Threshold – 80%** **Response-rate Target – 90%** **Response-rate Stretch – 100%**	**33%**	**50%**	**100%**	**100%**
The contract security provider will be measured on its ability to locate and return an "At Risk" patient, and when the patient is not located, follow the *Not Located Procedure*. **Locate/Return-rate Threshold –90%** **Locate/Return-rate Target – 98%** **Locate/Return-rate Stretch – 100%**	**66%**	**50%**	**63%**	**88%**

Code Green Response Rate Performance

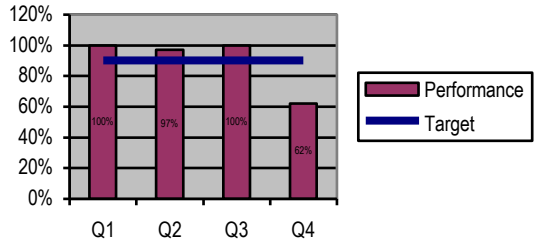


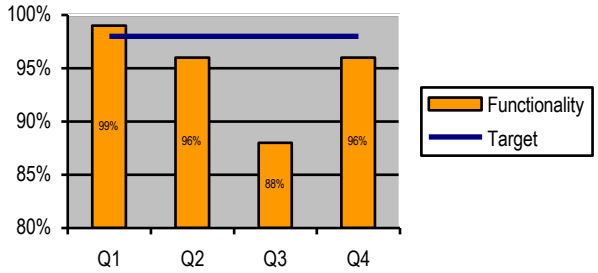
Code Green Return Rate Performance



SFSD Response Rate – Exceeded the target during the 4th quarter, achieving 100%.

Code Green Return Rate – Achieved an 88% in the 4th quarter. During Q4 an "At Risk" incident that resulted in SFSD locating the patient; however, the circumstances did not permit SFSD to return the patient to the hospital.

Customer Satisfaction	Q1	Q2	Q3	Q4
Performance Metric: On a monthly basis, a sample size of 100 customers, consisting of patients, visitors, employees, and physicians that had a recent contact with Security, will be surveyed on their experience. The Security Department will be measured on its ability to achieve a rating of Satisfied - Very Satisfied: **Threshold - 80%** **Target - 90%** **Stretch – 98%** Customer Satisfaction Performance  **Customer Satisfaction Results** – The overall satisfaction rate for the year was 90%. Quarters 1 – 3 were based on feedback from patients and visitors. Quarter 4 was based on feedback from hospital employees.	**100%**	**97%**	**100%**	**62%**

Electronic Security System Functionality	Q1	Q2	Q3	Q4
Performance Metric: On a monthly basis the SOC will inspect every element of the electronic security system for functionality. **Target**: 100% Electronic Security will be inspected, and will be 98% functional. Security System Functionality  **Electronic Security System Results** – The overall functionality of the system for the year was 95%, which is a 4% increase from 2015-2016.	**99%**	**96%**	**88%**	**96%**

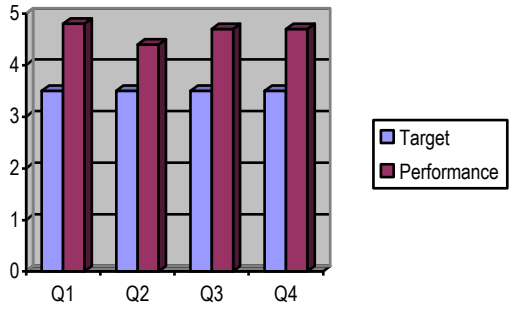
V. EFFECTIVENESS:

The functional effectiveness of the 2016-2017 Security Management Plan was reviewed and found to be effective. The 2016-2017 performance exceeded that of 2015-2016 in four of seven performance metrics.

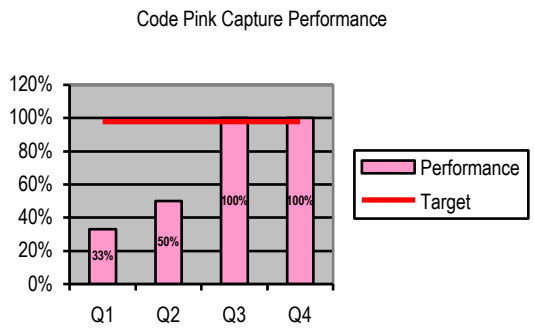
Additionally, performance in significant reporting metrics demonstrated the plan's effectiveness: SFSD continues to demonstrate a culture of care at the hospital, including collaboration with SFDPH in providing a safe environment.

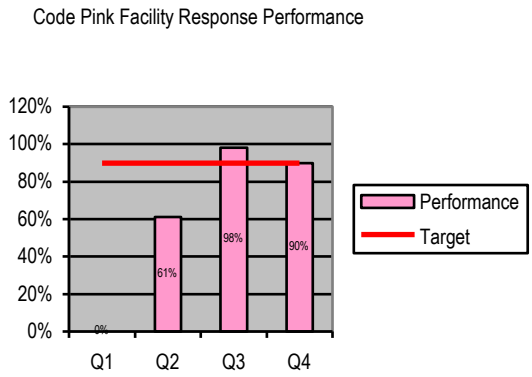
De-escalating risk behavior, and increasing visibility has aided in addressing the vulnerabilities identified by the security risk assessment. The Security Management Plan achieved the following significant reporting results:

SIGNFICANT REPORTING:

DPH and SFSD, MOU Performance Metrics	**Q1**	**Q2**	**Q3**	**Q4**
Performance Metric: A monthly security provider performance survey (SPS). The purpose for the assessment is intended to validate the security provider's compliance with MOU obligations, operational performance, management responsibilities and finance provisions. The provider is expected to maintain scores in the 3-5 range. A score of 1 to 2 indicates that a problem or issue exists that needs to be immediately addressed, and a score of 0 indicates a substantive problem or issue that requires immediate correction or resolution. DPH-SFSD MOU Performance Metrics  Each line item in the MOU was given a value, which ranged from "1 to 5." SFSD was measured on their ability to maintain scores in the 3-5 range. The overall MOU compliance for the year was 4.7.	**4.8**	**4.4**	**4.7**	**4.7**

Infant Abduction Drills (Code Pink)	Q1	Q2	Q3	Q4
Performance Metric: The hospital will be measured on its ability to prevent an abductor from leaving the facility: **Capture-rate Threshold –90%** **Capture-rate Target – 98%** **Capture-rate Stretch – 100%** The facility will be measured on its ability to respond to a Code Pink. Hospital personnel should be posted at the designated areas, as described in the Code Pink Policy. **Response-rate Threshold – 80%** **Response-rate Target – 90%** **Response-rate Stretch – 100%**	**33%** **0%**	**50%** **61%**	**100%** **98%**	**100%** **90%**

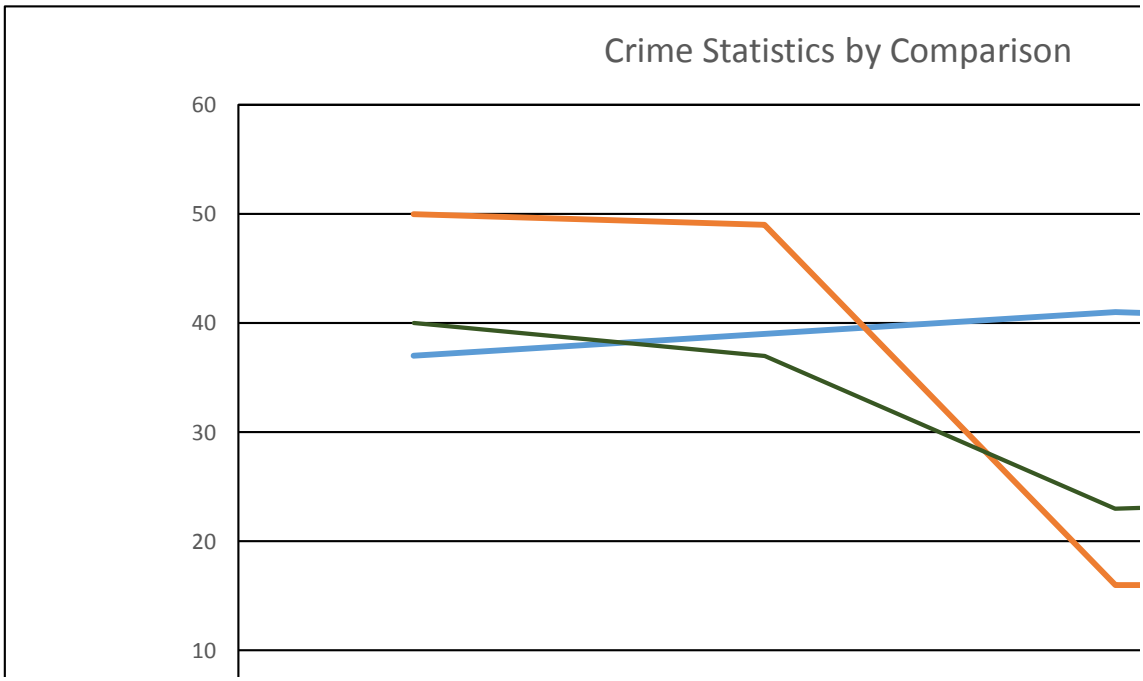




Infant Abduction Drills (Code Pink) – Based on the quarterly drills, the overall abductor capture rate for the year was 76%. The overall facility response rate for the year was 83%. The target for the capture rate and facility response was met or exceeded in quarters 3 and 4.

Serious Incident Reporting Yearly Comparison	Q1 2015-2016	Q1 2016-2017	Q2 2015-2016	Q2 2016-2017	Q3 2015-2016	Q3 2016-2017	Q4 2015-2016	Q4 2016-2017
SFSD - Facility Theft Reports	28	10	20	16	5	0	13	8
SFSD - Burglary Reports	2	3	2	2	0	4	1	1
SFSD - Battery Reports	16	22	25	17	10	15	1	11
SFSD - Sexual Offense Reports	1	1	0	0	0	1	0	2
SFSD – Assault Reports	3	3	1	2	0	0	1	2
SFSD - Robbery Reports	0	1	1	0	1	2	0	0
SFSD - Homicide Reports	0	0	0	0	0	0	0	0
Total Reports	**50**	**40**	**49**	**37**	**16**	**23**	**16**	**24**

Comparing 2015-2016 and 2016-2017 serious incidents decreased by 5% (7 incidents). Battery incidents were the primary driver for the increase during this period. Risk patients in ED and PES were the contributing factors for these crimes. Facility property thefts was the second most frequent incidents reported, which is contributed to the lack of electronic security systems monitoring the medical office buildings.

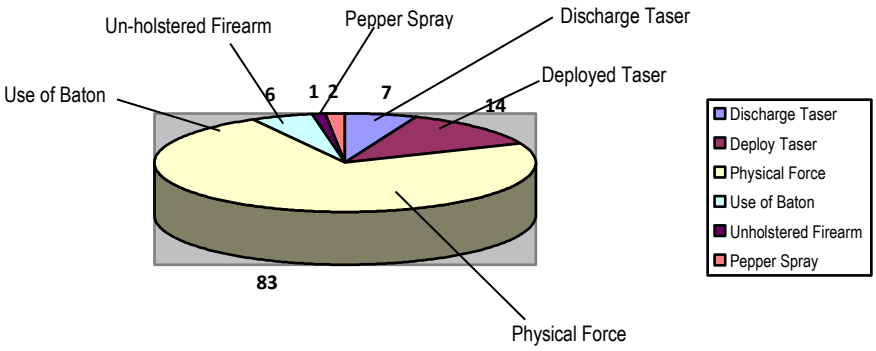


Over a 3-year period, serious incidents have continued to decrease. (22% from 2014.)

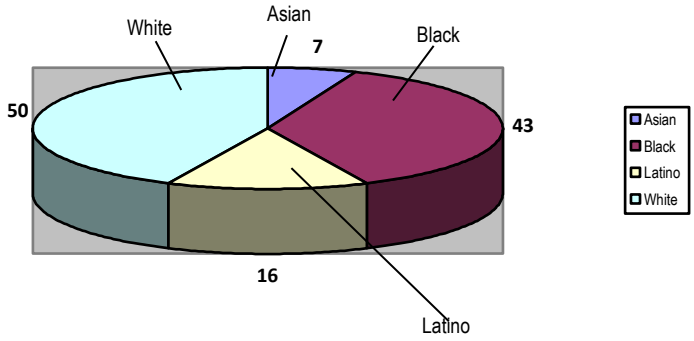
Contributing factors including: an effective security personnel resource plan, the collaborative efforts, communication, and mutual ownership by the DPH Director of Security and the SFSD Unit Commander in identifying, and troubleshooting emergent safety and security concerns, and the effectiveness of the Security Awareness Program, which has resulted in an increase reporting of incidents by hospital employees.

2016-2017, Use of Force Statistics	Q1	Q2	Q3	Q4
Monthly use-of-force data is tracked of all SFSD incidents occurring on ZSFG campus. In 2016-2017, there were 119 incidents involving use-of-force, which is broken down under the following categories: 1. Type of Force 2. Number of incidents 3. Cases 4. Location 5. Demographics	38	11	47	23

Types of Force



Demographics



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Type of Force	Cases	Demographics	Locations
Physical Force – 83	Patients – 46	Males – 106	Emergency – 24
Un-holstered Firearm - 1	Non Patients – 70	Females – 21	PES – 33
Discharge Taser - 7	Felonies – 20	Asian – 7	Psych Wards – 5
Deploy Taser - 14	Misdemeanors – 41	Black – 43	Inpatient Units – 19
Use of Baton – 6	Mental Health Incidents – 45	Latino – 16	Campus Buildings – 35
Pepper Spray - 2		White - 50	Public Streets – 23

** The numbers do not equal by category. There are incidents where more than one type of force was used on an individual at a given location.*

Comparing 2015-2016 with 2016-2017, use-of-force incidents decreased by 31%. The significant reporting objectives will remain unchanged in 2017-2018.

HAZARDOUS MATERIALS & WASTE MANAGEMENT

The Hazardous Materials and Waste Management Program is designed to minimize the risk of injury and exposure to hazardous materials through proper selection, use, handling, storage and disposal. The program also works to control the risk of exposures to hazardous components such as asbestos and lead in existing building materials which may be disturbed during construction and renovation activities. The program assures compliance with all applicable local, State, and federal codes and regulations.

SCOPE

The Hazardous Materials and Waste Management Program applies to the entire campus of San Francisco General Hospital and Trauma Center (ZSFG) with the exception of UCSF research activities. The Hazardous Materials and Waste Program also works to ensure that construction activities do not result in patient, staff, or visitor exposures to potentially hazardous materials or processes.

ACCOMPLISHMENTS

- Continued to work with the Hospital Rebuild Team, ZSFG Facilities, and Infection Control to allow construction within operating hospital buildings as well as in very close proximity to staff, patients, and visitors without significant incidents or exposure concerns.
- Maintained ZSFG Environmental Permits, and acted as liaison between regulatory agencies including the TJC, SF PUC, DPH Hazardous Materials Unified Program Agency, and Cal/OSHA and ZSFG. Continued to work with ZSFG management and staff regarding Cal/OSHA regulations, policies, and practices and assisted in responding to inquiries from Cal/OSHA regarding concerns about working conditions.
- Updated Hazardous Materials and Waste Management Plan (5.01), Hazardous Materials Exposure Monitoring Policy (5.03), Hazardous Materials Spill Policy (5.04), Respirator Catalog, Waste Disposal Guidelines Chart.
- Updated Hazard Communication training module for Halogen.
- Trained Oncology Nurses on the proper use of chemo spill cleanup kits.
- Participated in project to assess surface contamination in units that routinely use antineoplastic drugs.
- Performed exposure monitoring in the OR, 1N, PACU, Microbiology, Building 20.

PROGRAM OBJECTIVES FOR 2016-2017

Objectives	Met / Not Met	Comments and Action Plans
Enhance (chemical) hazard communication.	**Met**	Worked with DET to develop an updated Hazcom Halogen training. Based on discussions with DET, it was determined that the deployment of an additional "advanced" Hazcom module was not warranted.

Reevaluate hazardous gas and vapor exposures.	**Met**	• Performed waste anesthetic gas monitoring in the following locations:
		  ○ 1N Clinic
		  ○ OR
		  ○ PACU
		• Performed formaldehyde monitoring in OR.
		• Performed mercury monitoring in B20, 2nd floor.
		• Monitored for hydrogen sulfide in the Microbiology Lab.

Improve storage of potentially hazardous chemicals.	**Met**	Worked with OR on formalin handling/storage procedure.
Reassess types and locations of chemical spill kits.	**Met**	• Revised EOC 5.04 Hazardous Materials Spill Policy. • Worked with OR to purchase spill kits for formalin. • Identified and purchased additional spill kits for EH&S.

PERFORMANCE METRICS

The following metrics provide the Environment of Care Committee with information needed to evaluate performance of the Hazardous Materials and Waste Management Program activities and to identify further opportunities for improvement:

Objectives	Met / Not Met	Comments and Action Plans
Prepare and deploy additional / advanced hazard communication course.	**Met**	Worked with DET to develop an updated Hazcom Halogen training. Based on discussions with DET, it was determined that the deployment of an additional "advanced" Hazcom module was not warranted.
1. Conduct new "baseline" monitoring in areas where potentially hazardous gases and vapors are used including the Operating Rooms and Morgue. 2. Revise EOC Policy 5.03 to reflect findings of baseline monitoring.	**Met**	• Performed waste anesthetic gas monitoring in the following locations: o 1N Clinic o OR o PACU • Performed formaldehyde monitoring in OR. • Revised EOC Policy 5.03.
Work with at least one unit or group with high-volume usage of potentially hazardous materials to assess and if necessary improve hazardous materials storage practices.	**Met**	Worked with OR on formalin handling/storage procedure.
1. Work with at least one unit or group with high-volume usage of potentially hazardous materials to assess adequacy of chemical spill kits. If necessary assist with the selection of improved spill kit. 2. Revise EOC Policy 5.04 to reflect findings of assessment.	**Met**	• Revised EOC 5.04 Hazardous Materials Spill Policy. • Worked with OR to purchase spill kits for formalin. • Identified and purchased additional spill kits for EH&S.

The Environment of Care Committee has evaluated the objectives and determined that objectives have been met. The Program continues to direct hazardous materials and waste management in a positive proactive manner.

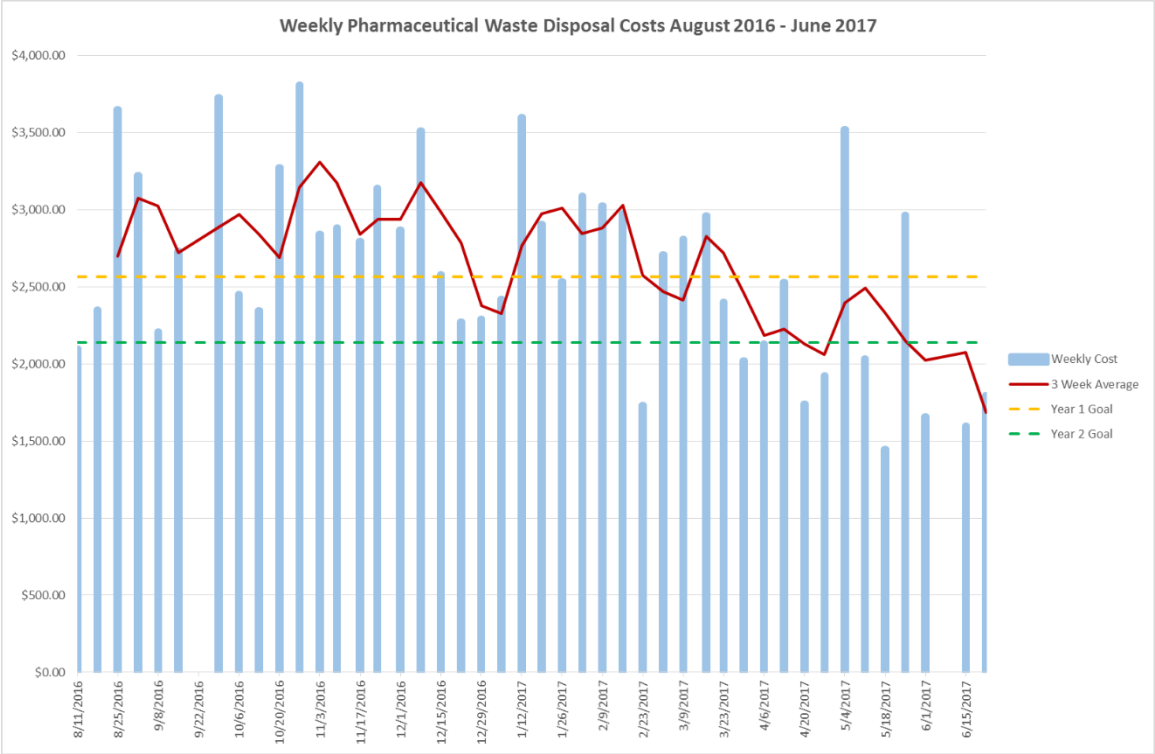
EFFECTIVENESS

Effectiveness is based on how well the scope fits current organizational needs and the degree to which current performance metrics result meet stated performance goals. The Environment of Care Committee has evaluated the Hazardous Materials and Waste Management Program and

considers it to be effective.

GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2017-2018

- **Reduce costs for pharmaceutical waste disposal.** Changes in waste disposal requirements necessitated a change in our pharmaceutical waste disposal process. This change resulted in much higher waste disposal costs than initially expected. During 2017-2018, EH&S will assess the causes of the increase and institute countermeasures to lower costs.



- **Enhance hazardous materials spill response procedures.** Upcoming additions to the NIOSH Hazardous Drugs List will require the development of new protocols and procedures to address spills that may occur in the Units. In addition, in 2016-2017 there were hazardous materials spills/releases that required us to engage external resources for clean-up. There was not a set procedure in place to bring in outside help, which led to delays. In 2017-2018 EH&S will develop internal procedures to address small scale hazardous drug spills. We will also work with the DPH Municipal Hazardous Waste Management Program to develop a procedure to address hazmat spills that are beyond ZSFG's capability to clean up.

- **Reduce and/or eliminate exposure to a hazardous material on campus.** The most effective ways to minimize exposure to a chemical are to limit/eliminate the chemical's use or to implement engineering controls. In 2017-2018 EH&S will seek to reduce employee exposures to a hazardous materials using these control methods.

The proposed performance metrics for these goals will include:

Hazardous Materials & Waste Management Proposed Performance Metrics for 2017-2018	Target
AIM: Reduce costs for pharmaceutical waste disposal	• Finalize Reducing Pharmaceutical Waste Disposal Costs A3. • Keep average cost per pickup <$2565
AIM: Enhance hazardous materials spill response procedures.	• Work with at least one unit or group to train staff on how to clean up hazardous drug spills. • Work with the DPH Municipal Hazardous Waste Management Program to develop a procedure to address hazmat spills on campus.
AIM: Reduce and/or eliminate exposure to a hazardous material on campus.	• Eliminate a hazardous substance currently used at ZSFG or reduce exposure to a substance through the implementation of engineering controls.

EMERGENCY MANAGEMENT

SCOPE

The Emergency Management Program provides information, planning, consultation, training, resources, and exercises for hospital staff and leadership to ensure that Zuckerberg San Francisco General Hospital and Trauma Center (ZSFG) effectively mitigates the impact of, prepares for, responds to, and recovers from emergencies and disasters and therefore is able to sustain its Mission of providing quality healthcare and trauma services with compassion and respect. These efforts support ZSFG's core value of patient and staff safety as well as the accountability goal of complying with regulatory standards. The Director of Emergency Management develops and implements policies, procedures, protocols, standard work and other job aids in accordance with:

- California Administrative Code Disaster and Mass Casualty Program (Title 22)
- The National Incident Management System (NIMS) and the California Standardized Emergency Management System (SEMS)
- The Joint Commission Standards and Elements of Performance.

The Emergency Management Program encompasses all departments and areas of the ZSFG campus.

ACCOMPLISHMENTS

- Implemented the Everbridge Emergency Notification System and developed standardized message templates for our most likely and impactful scenarios to alert ZSFG staff to Hospital Incident Command System (HICS) Activations and other emergencies.
- In partnership with Psychiatry, provided Psychological First Aid Training to over 60 staff to improve patient, family and staff support during and after emergencies and disaster responses.
- In partnership with Surgery, launched our Stop the Bleed campaign by training over 50 staff in basic bleeding control methods.
- Continued to provide HICS Basics training for ZSFG managers and supervisors.
- Clinical and HICS Incident Management Teams effectively managed one full-scale mass casualty and patient decontamination exercise, departmental preparedness drills for the Bay to Breakers (medical surge) and ShakeOut (earthquake preparedness), a hospital-wide earthquake and extended operations exercise, a commercial power failure, a mutual aid activation for a widespread power failure impacting other SF hospitals, planned and unplanned downtime incidents, the Fleet Week Peer-to-Peer Medical Exercise with the US Navy, and ZSFG's response to the UPS Active Shooter incident.

PROGRAM OBJECTIVES FOR FY 2016-2017

Objectives	Met/ Not Met	Comments and Action Plans
The hospital conducts an annual hazard vulnerability analysis (HVA) to identify potential emergencies that could affect demand for the hospital's services or its ability to provide those services, the likelihood of those events occurring, and the potential impact and consequences of those events. The HVA is updated when significant changes occur in the hospital's services, infrastructure, or environment.	**Met**	Updated 1/12/17 and shared with SFSD, SFFD, SFPD, DPH, the SF Department of Emergency Management and other SF hospitals on 1/23/17.
The hospital develops and maintains a written all-hazards Emergency Operations Plan that describes the response procedures to follow when emergencies occur. The plan and associated tools facilitate management of the following critical functions to ensure effective response regardless of the cause or nature of an emergency: • Communications • Resources and Assets • Safety and Security • Staff Responsibilities and Support • Utilities and Critical Systems • Patient Clinical and Support Activities	**Met**	ZSFG's Emergency Operations Plan was reviewed and approved with no revisions recommended after significant changes the prior year.
The hospital implements its Emergency Operations Plan when an actual emergency occurs.	**Met**	06/14/17 UPS Active Shooter Response
ZSFG's emergency response plan and incident command system facilitate an effective and scalable response to a wide variety of emergencies and are integrated into and consistent with the Department of Public Health Disaster Plan and the City and County of San Francisco Emergency Operations Plan, and are compliant with the California State Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).	**Met**	Demonstrated plan effectiveness and scalability during the Statewide Health and Medical Exercise, UPS Active Shooter Response, Mutual Aid Activation and internal activations for downtime procedures.
The hospital trains staff for their assigned emergency response roles.	**Met**	• New Employee Orientation • Annual Halogen Emergency Preparedness & Disaster Response Training • HICS Basics Training
The hospital conducts exercises and reviews its response to actual emergencies to assess the appropriateness, adequacy and effectiveness of the Emergency Operations Plan, as well as staff knowledge and team performance.	**Met**	Completed After Action Reports and performance evaluations of two actual emergencies and one multi-functional and one full-scale exercise.
Annual evaluations are conducted on the scope, and objectives of this plan, the effectiveness of the program, and key performance indicators.	**Met**	Annual Evaluation by Disaster Committee completed on 9/14/17.

The Disaster Committee and the Environment of Care Committee have evaluated these objectives and determined that they have been met. The program continues to direct emergency management preparedness and response in a positive and proactive manner.

PERFORMANCE METRICS

An analysis of the program objectives and key performance indicators is used to identify opportunities to improve performance and evaluate the effectiveness of the program. This analysis provides the Disaster and Environment of Care Committees with information that can be used to update the Emergency Management program activities. The following are current performance metrics:

Performance Metrics	2016-2017 Goal	2016-2017 Results	Comments & Action Plan
AIM: During Exercises and Actual Incidents, Staff will Complete Appropriate Documentation. • HICS Job Action Sheets • HICS Forms • Communication of Incident Action Plan	**95%** **95%** **95%**	**95%** **95%** **90%**	**Substantially Met.** Continuing HICS trainings for staff to reinforce improvements made. Develop and implement standard work for each function to ensure improvements are sustained.
AIM: Develop and Implement Standard Work for Critical Tasks including HICS Activation and Staff Notification.	**100%**	**100%**	**Met.** Developed and implemented Standard Work for HICS Activation, Command Center set-up, and Staff Notification including updates for new notification systems.
AIM: Management Team Staff Will Complete ICS Training. Total Current Staff who have completed: • ICS 100 – 200 – 700 • HICS Basics	**250** **250**	**214 (86%)** **278 (111%)**	**Partially Met**. Continue providing HICS Basics and other trainings for all new Supervisory and Management staff. Follow up to ensure completion of required FEMA ICS courses. Adjusted completed numbers to remove staff who have retired or left ZSFG. Ongoing through 2017-2018, with increased focus on specific staff roles.
Implement a Mass Notification System for ZSFG Emergencies.	**100%**	**100%**	**Met**. Implemented Everbridge Emergency Notification System and developed standardized message templates for our most likely and highest impact emergencies.
AIM: Implement at Least 90% of Corrective Actions Identified in FY 2015-2016 and FY 2016-2017 Exercises and Actual Incidents by 6/30/17.	**90%**	**100%**	**Met.** A total of 74 issues were identified in the prior three years, with corrective actions implemented for 100%. 50 issues (68%) are completely resolved and 24 others are primarily resolved but still requiring ongoing monitoring to ensure sustained effectiveness of solutions.
AIM: Develop and Implement a Hazard Specific Plan for Response to Natural Gas Leaks around the ZSFG Campus.	**100%**	**100%**	Drafted and implemented Hazard Specific Plan for Natural Gas Leaks. No gas leaks have occurred since implementation.

EFFECTIVENESS

The Emergency Management program has been evaluated and is considered to be effective by both the Disaster Committee and the Environment of Care Committee. The program continues to direct and promote emergency and disaster preparedness and response capabilities in a proactive manner.

GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2017-2018

- Continue providing training on the Hospital Incident Command System (HICS) for all Incident Management Team members, department supervisors and management level staff.
- Partner with Security to develop departmental training and implement a progressive exercise program for Code Silver Active Shooter response.

The proposed performance metrics for these goals include:

Emergency Management Proposed Performance Metrics for 2016-2017	Target	Comments & Action Plan
AIM: Specific Staff Will Complete Required Training in ICS. Total Current Staff who have completed: • ICS 100 – 200 – 700 43% • HICS Basics 68%	 **90%** **90%**	This is a more focused approach to ensure that the 145 staff in designated manager and supervisor roles have completed all required Incident Command System training.
AIM: During Exercises and Actual Incidents, Staff will Complete Appropriate Documentation. • HICS Job Action Sheets • HICS Forms • Communication of Incident Action Plan	 **95%** **95%** **95%**	Continuing focus on standard work, and required check-out procedures to ensure more thorough communication and appropriate documentation.
AIM: Develop and Implement Standard Work for Critical Tasks including HICS Activation and Staff Notification.	**100%**	Standard work for critical tasks will help reduce the variability in notification and communication of critical information to staff.
Increase number of staff in Everbridge Notification System as well as percentage enrolled with multiple modes of contact. (Baseline 3967 - 24% enrolled)	**4500** **35%**	Needed to ensure rapid and consistent notification of staff in outer buildings as well as informational updates and directives for critical actions.
Improve Staff Response to Everbridge Notificaitons. (Baseline < 10% confirmed)	**35%**	Needed to ensure staff receive critical messages and take appropriate action.
AIM: Develop and Conduct Code Silver Exercises to Ensure Hospital Staff are as Prepared as Possible for Active Shooter Incidents. • Table Top Exercise – Campus Incident • Table Top Exercise – Main Hospital Incident • Departmental Response Functional Exercises – Key Areas: ED, ICUs, Labor & Delivery, Nursery	 **1** **1** **4**	Coordinate with Director of Security and SFSD to update plan and provide safe, controlled exercises to further develop and test critical staff actions for initial response and management of an incident after the shooter is neutralized.

MEDICAL EQUIPMENT MANAGEMENT

The Medical Equipment Management Program is intended to promote the safe and effective use of medical equipment in support of patient care. The program is designed to minimize risk associated with the use of medical devices through the careful selection, acquisition and maintenance of all medical equipment used for patient care.

SCOPE

The Medical Equipment Management Program applies to all medical devices and related services provided on the ZSFG campus. Services are available on-site Monday through Friday, 0700–1730, excluding holidays. A Biomed technician is on-call for emergency work orders after hours to provide 24- hour coverage, 7 days per week, 365 days per year.

ACCOMPLISHMENTS

Program activities highlights for FY16-17 include:

- **Activities**
  - Improved tracking of medical recalls by implementing ECRI--AutoMatch for all medical devices listed in Biomed database.
  - Replaced the reverse osmosis water purification system for the Ward17 Outpatient Dialysis Clinic.
  - Deployed the Zoll defibrillator dashboard.
  - Updated the Laser Safety Management Plan for consistency with the most current ANSI guidelines.
  - Updated the Halogen on-line laser safety training for clinical staff with assistance from the Laser Training Institute.

- **Developing People**
  - Hired three (3) new Biomed Technicians during FY16-17.
  - Provided 18 training sessions for the Biomedical Technicians during FY16-17. Training included courses offered by manufacturers, schools, and professional institutions. Technician training curricula was targeted to meet the needs of the hospital. Respiratory, physiological monitors and anesthesia were the main areas of training.
  - Provided an on-site laser safety seminar on Oct 17-18 where training was provided for nursing staff and the laser safety officer. Nurses from the OR, Ophthalmology, and outpatient clinics attended the seminar.

- **Safety**
  - Reported six (6) medical device issues to MedSun. We are currently working with Philips to resolve a problem related to the ECG waveforms.

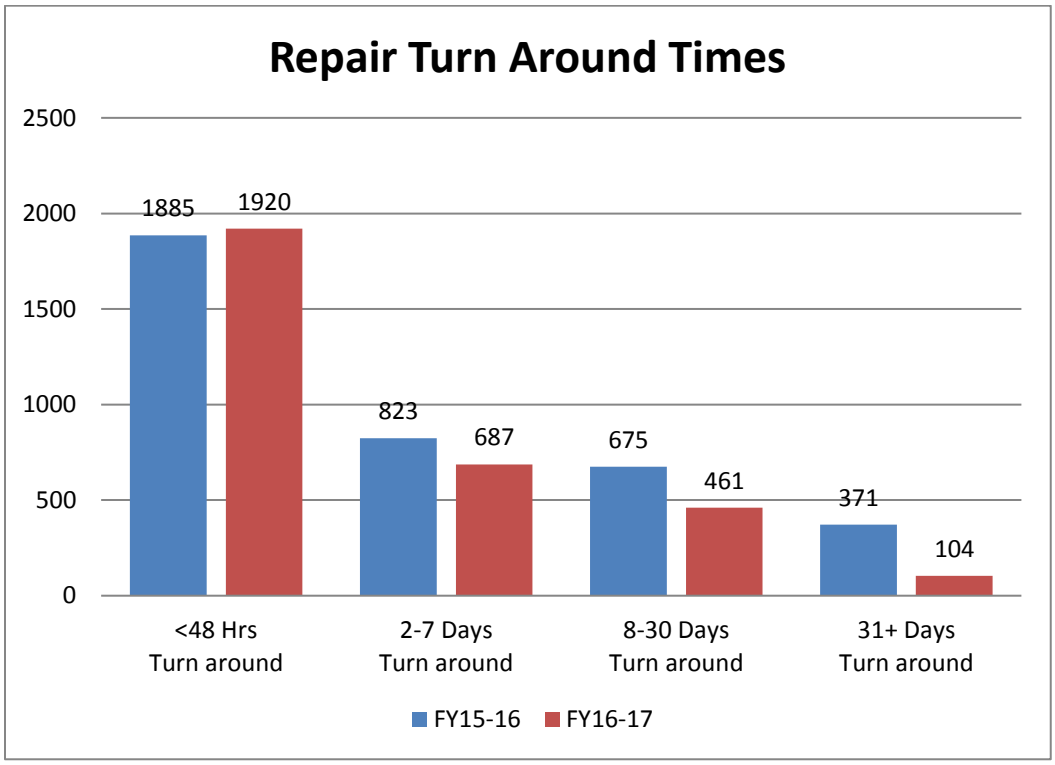
PROGRAM OBJECTIVES

Objectives	Met/ Not Met	Comments and Action Plan
Perform incoming inspection of all new medical devices received at Zuckerberg San Francisco General Hospital within 5 days.	**Met**	**All new medical devices were received and inspected for proper operation prior to patient use. The Biomedical department inventoried 3,413 devices during FY16-17. 1,720 devices were retired, primarily due to the move to Building 25. All received devices were recorded in the Computerized Maintenance Management System (CMMS) Database. Effective June 2016, all medical devices have been categorized by modality, (i.e., General Biomed, Laboratory and imaging equipment).**
100% of all medical equipment managed by the Biomedical Engineering Department is accounted for and properly maintained. Preventative Maintenance (PM) completed within 30 days of creation due date: **Target – life support completion rate = 100%.** **Target – non-life support completion rate ≥ 95%.** **% of device not located during PM threshold ≤ 5%.**	**Met**	**All 10,934 active devices at ZSFG managed by Biomedical Engineering were tracked and maintained.** **Life support completion rate for FY16-17 was 99.8%.** **Non-life support completion rate for FY16-17 was 96.5%.** **% of CNL devices for the year was 1.5% (117 devices were not located).**
Provide cost-effective service and contract management.	**Met**	**During FY16-17 the Biomed Department worked with supply chain and the City Contracts Office to finalize the maintenance agreement for infusion pumps.**
Maintain an accurate inventory of all medical equipment	**Met**	**The Biomed Department worked with ECRI to standardize our data to match the universal medical device nomenclature system (UMDNS).**
Provide service resulting in a high level of customer satisfaction.	**Met**	**The Biomed department has standing meetings with most clinical areas. We meet regularly every month.**

PERFORMANCE METRICS

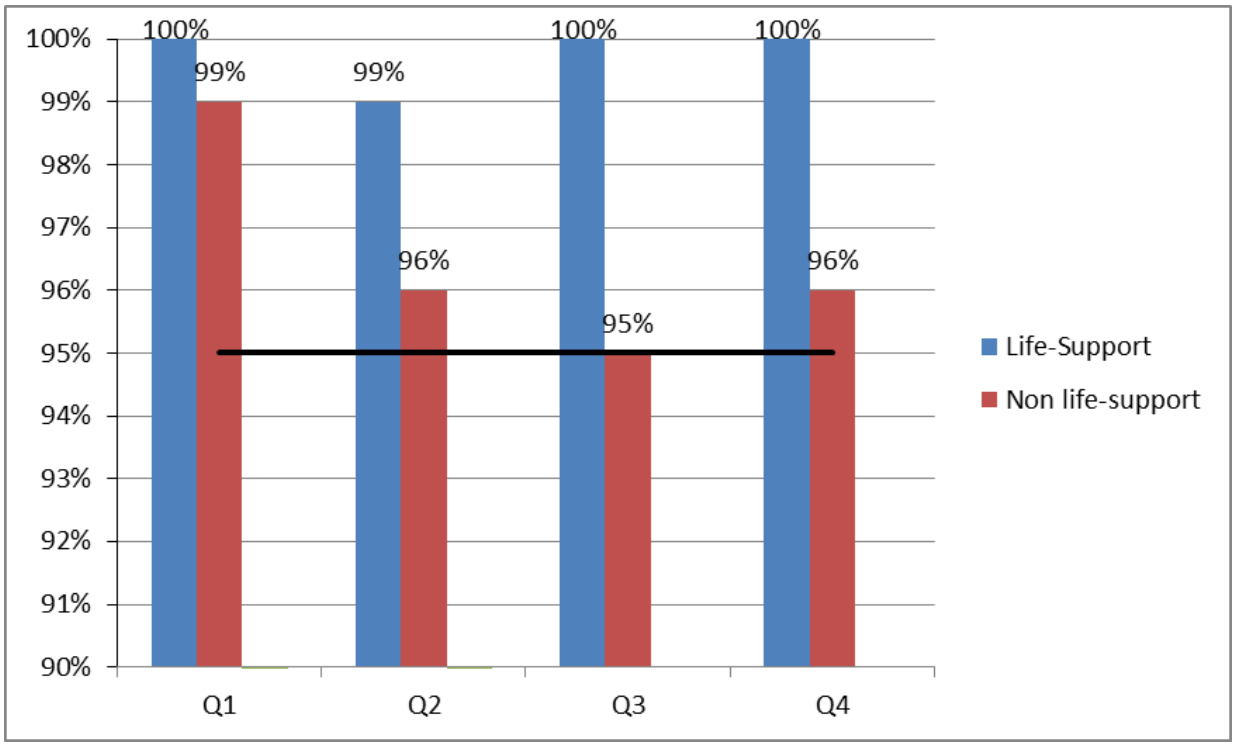
Parameter	1st QTR	2nd QTR	3rd QTR	4th QTR	Annual Total Number Of Service Requests
Work Orders (repairs, inventory, alerts, etc.)	988	3,989	1,128	1,014	7,119
Preventative Maintenance Required (scheduled and unscheduled)	1,735	1,637	2,357	2,211	7,940
TOTAL # of Work Order Requests	2,723	5,626	3,485	3,225	**15,059**

There was a 14% increment on the total number of work orders in FY16-17 compared to FY15-16. Q2 has the highest number of work orders due to the addition of all of the suction regulators and flowmeters to Biomed's inventory. The quantities account for all the work orders in FY16-17.



This chart presents the turnaround time only for repair work orders. The amount of repairs for FY16-17 was 3,170 which were lower than FY15-16 (3,754 repairs). The lower number of repairs is attributed to the fact that all the equipment was new for the second half of the year in the in-patient areas. Improvements in turnaround time have been made.

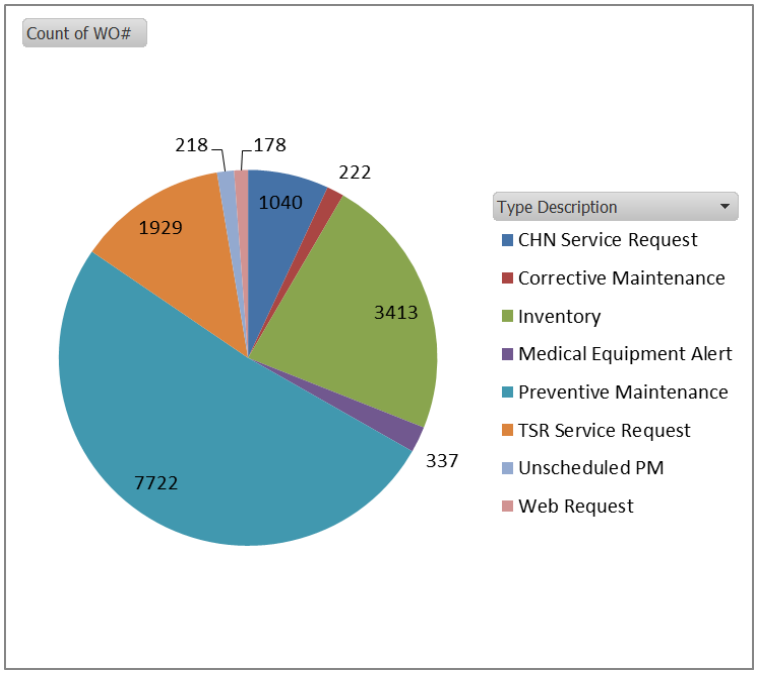
PM COMPLETION DATA



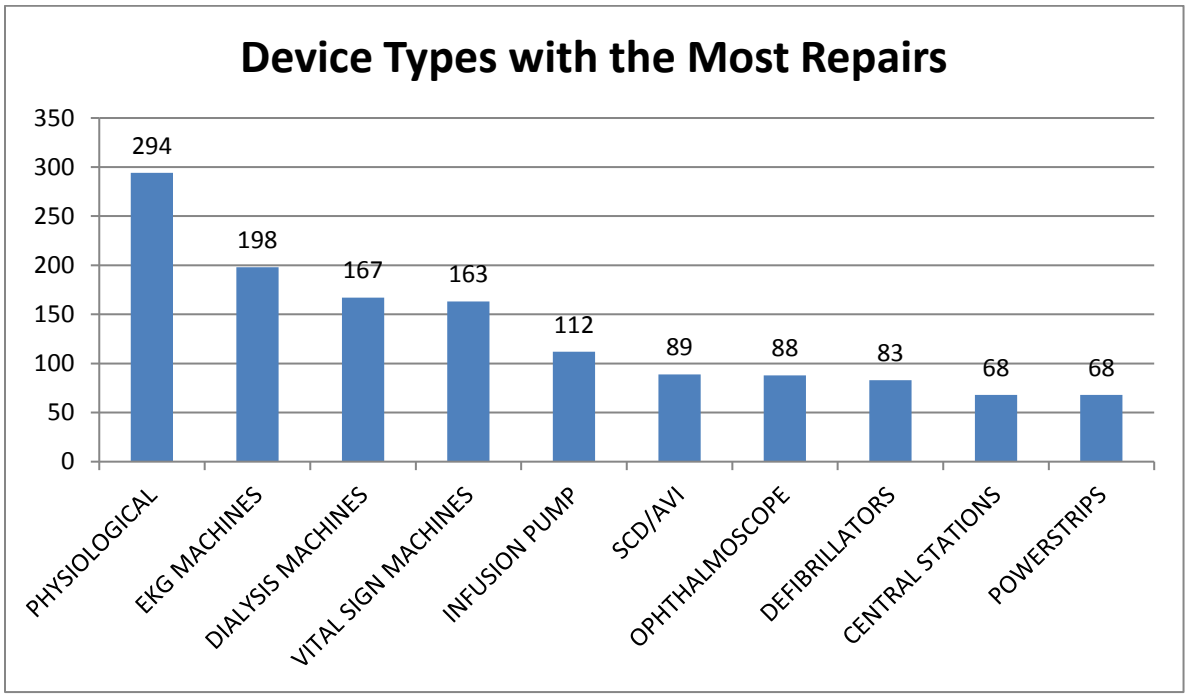
The Biomed Department monitors the completion of the scheduled inspection every month for life-support and non-life support equipment.

Life support equipment is monitored separately from other equipment modality and it has a threshold of 100%. It should be noted that during the month of December we were unable to locate 4 Zoll defibrillators. The Biomed department has met its goal of at least a 95% completion rate for non-life support and 100% completion rate for life support equipment. PM work orders not completed during the PM cycle (device is in patient use) are documented and the Biomed department keeps them open until the work is performed. If the device is not located, the biomed department works the clinical staff to locate the device.

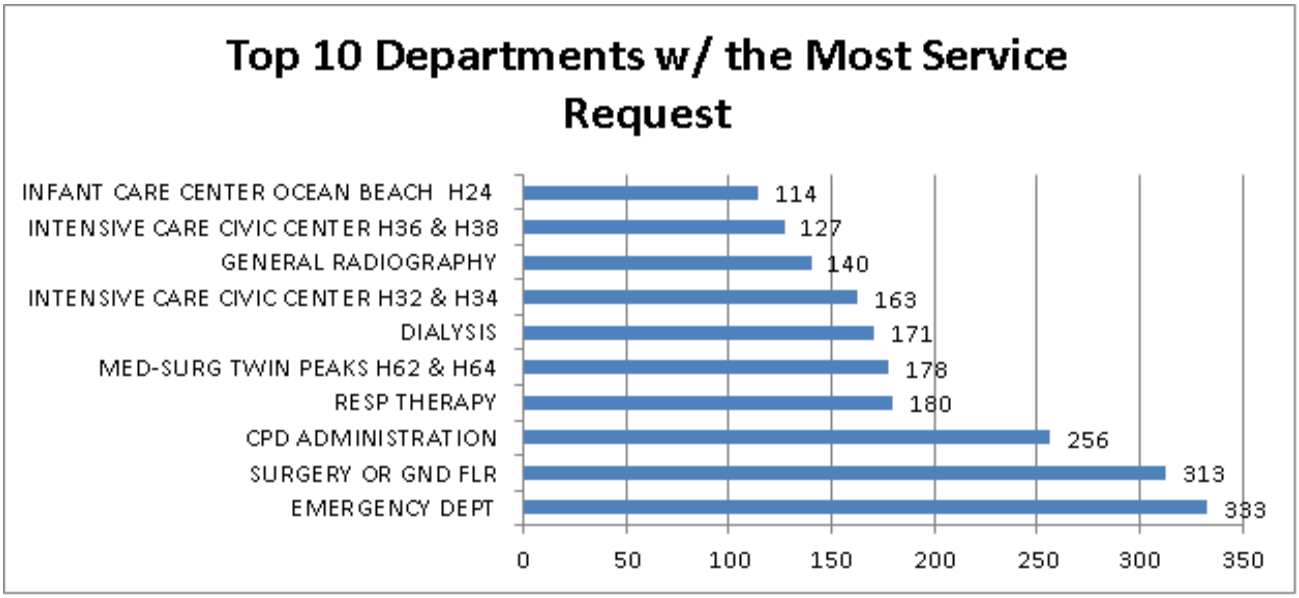
WORK ORDER DATA



This chart reflects data obtained from all work orders. It is simply where we spend our time. We added suction regulators and flowmeters to our inventory in Q2, an additional 2000+ devices, which is the reason the amount of inventory work orders was so high.



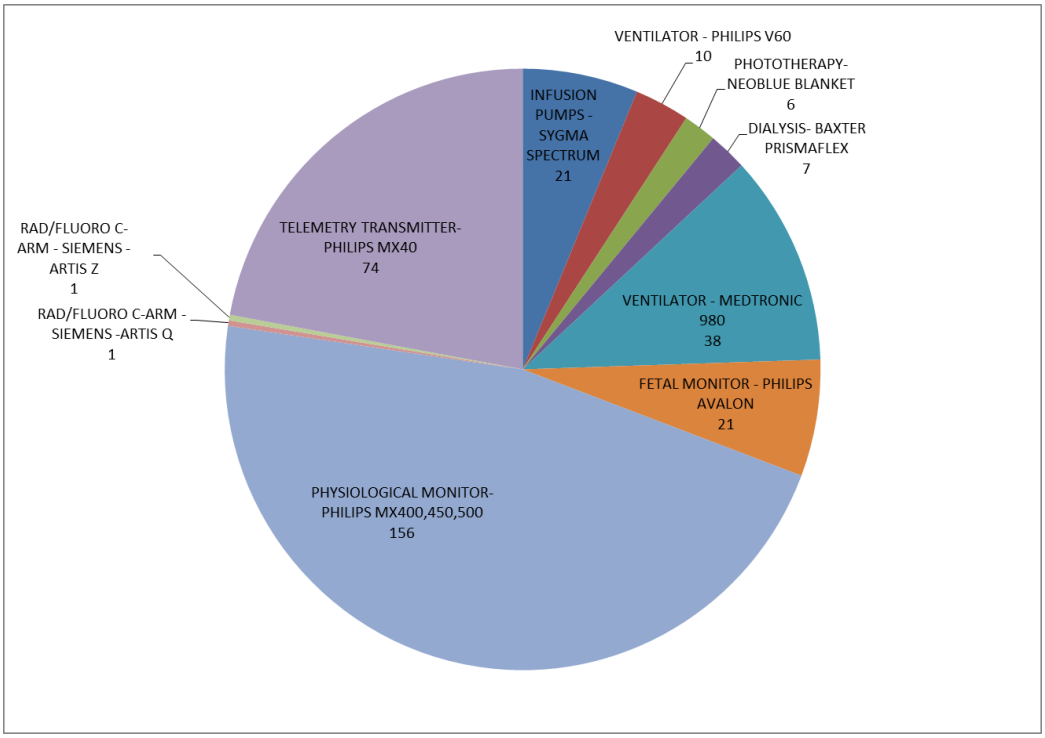
Physiological monitors have the most service request. However, most of the issues are related to use and accessories. On the other hand, the EKG machines have more issues related to performance failure. The keyboard, leads and display have a high failure rate. The EKG machines in the ER require the most service.



This chart shows the departments with the most service repairs. One interesting fact is that there were 107 service requests for repairs on EKG machines. In the OR the video integration system is the device with the most service request with 25 service request.

Proposed Performance Improvement FY16-17	Met / Not Met	Results
Revise the Medical Equipment Management plan to meet new TJC Elements of Performance.	Met	The Medical Equipment Management Plan (MMP) was revised and updated to meet the latest guidelines from TJC and other regulatory agencies. The Quality Management and Biomedical Engineering Departments worked to standardize the process for reporting and investigating medical device incidents. Also, we included alternative equipment maintenance (AEM) as one of the possible maintenance strategies for medical equipment.
Implement standard work to prioritize the repair of mission critical equipment.	Met	We have created a special category in TMS to indicate life support equipment. We have established standing morning huddles where we revise all open repairs.
Reduce cost of ownership for medical equipment.	N/A	During the first year after we moved to Bldg. 25 equipment expenses for maintenance were low, as all equipment was covered under warranty. This goal is not applicable for FY16-17.
Develop a list of mission critical equipment and create a strategy to handle the repair and reduce risk of extended downtime.	Met	We identified two at-risk areas: Outpatient Dialysis (Ward 17) – The RO was almost 15 years old and Marcor (the manufacturer) had discontinued support. We replaced the RO with a Siemens RO from Laguna Honda that was never used. Building 25 Med-Surg – We didn't have a backup central station for the telemetry control room. We received approval to purchase a backup CPU. We have reduced the potential for downtime from hours or days to only 1 hour or less.

MEDICAL DEVICES RECALLS



We had 355 devices affected by recalls during FY16-17; Philips was the manufacturer with the most service recalls. Most of the affected devices have been remediated by the manufacturer. However, some of them are waiting for remediation. For example, only half of the fetal monitors have been remediated by Philips.

EFFECTIVENESS

The Medical Equipment Management Program has been evaluated by the multi-disciplinary Environment of Care Committee and is considered to be effective.

GOALS AND OPPORTUNITIES FOR IMPROVEMENT FOR FY17-18

- **Safety:** Medical devices cybersecurity. Perform an assessment for all medical equipment connected to the ZSFG network. Identify devices on the network handling ePHI in the Biomed CMMS. Develop and initiate measures to address cybersecurity risks discovered in the assessment.

    1. Record MAC address
    2. Software version
    3. Identify if it stores ePHI
    4. Recommend measures for securing “high risk” devices

- **Finance:** Capture the Cost of Service Ratio (COSR) for our medical equipment program.

    1. Capture labor expenses
    2. Parts expenses
    3. Supplies expenses
    4. Contract expenses

LIFE SAFETY MANAGEMENT

The Life Safety Management Plan demonstrates comprehensive understanding, application, and adherence to the latest life safety codes of the National Fire Protection Association (NFPA), State & local standards, and as required by various regulatory bodies, e.g., CMS & The Joint Commission, et. al. The plan is designed to ensure an appropriate, effective response to fire emergencies that could endanger the safety of patients, staff & visitors, and the Zuckerberg San Francisco General environment (ZSFG).

SCOPE

The Life Safety Management Program applies to all 15 buildings on the ZSFG campus (1.8m sqft of floor space), including all construction projects. Notification and response to any event includes the ZSFG Fire Marshal and Facility Services staff and hospital leadership.

ACCOMPLISHMENTS

- Completed annual test, inspection, and repairs to fire and smoke dampers on the 2nd & 3rd floors in Bldg 5 per NFPA standards: required every four years. The intent is to test and inspect two floors per year to maintain compliance at a minimal and predictable financial cost. The ZSFG HVAC crew has repaired broken dampers per the inspection report, and provided damper access to previously inaccessible dampers.
- Completed test, inspect and repairs to all fire smoke dampers in Bldg 25. Per NFPA standards, the FSDs are required to be tested within 1 year of commissioning. ZSFG HVAC crew tested 1010 FSDs within 8 months at a labor cost of ~$50K, about ½ the cost of an outside vendor cost. Henceforth, our plan is to divide the building into 6 segments over the next 6 years for ongoing inspection, testing, and repairs.
- Annual HVAC smoke control testing and repairs completed in February. Smoke control testing, in addition to being a requirement, demonstrates a safe and reliable smoke control system.
- Assessed risks and implemented Interim Life Safety Measures (ILSM) as necessary for projects in Bldg 5, Bldg 25, and the remainder of the ZSFG Campus. There are 30-40 ongoing projects on the ZSFG Campus at any given time. Continuous project monitoring enhances the care experience in addition to a quality, and safe patient care environment.
- There were many more False Fire Alarms on the ZSFG Campus, especially in Bldg 25 this past year. Facilities Staff used this as an opportunity to train staff on life safety features of the Campus, and orientate responding crews with SFFD to our new hospital.
- Recertified 15 Engineers in Fire Pump testing and operations for Bldg 25.

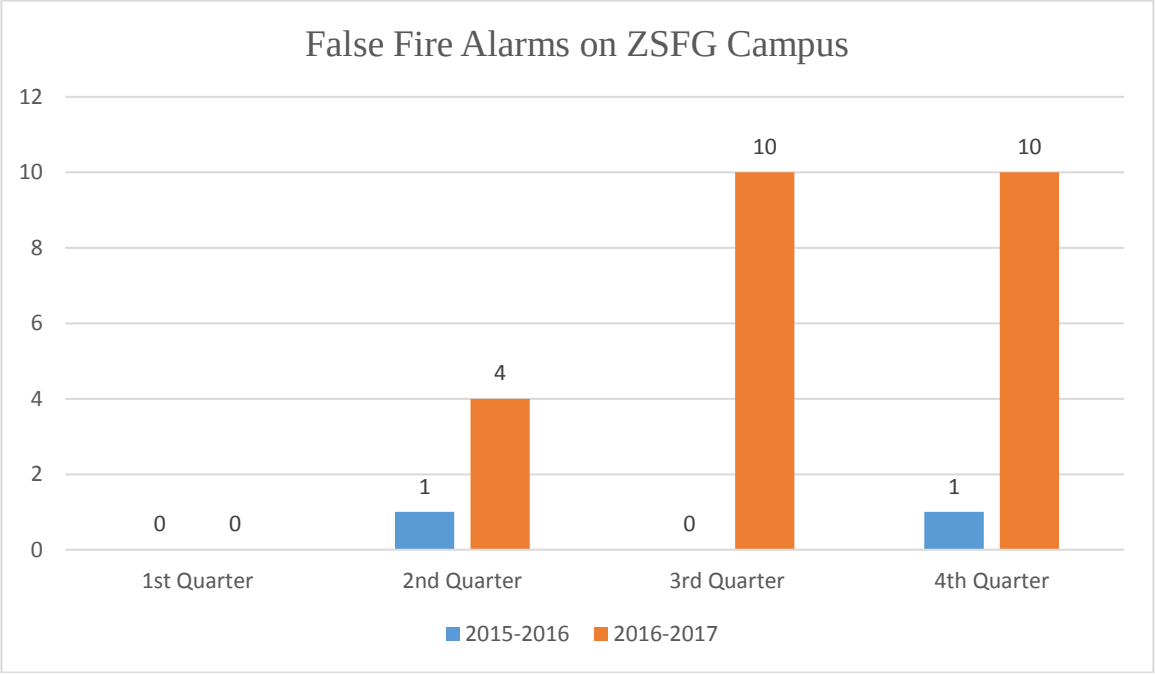
PROGRAM OBJECTIVES

Objectives	Met/ Not Met	Notes/Action Plan(s)
The Fire Plan defines the hospital's method of protecting patients, visitors, and staff from the hazards of fire, smoke, and other products of combustion and is reviewed and evaluated at least annually.	Met	At a minimum, annually review the SFGH Fire Plan. Problems are assessed, and addressed for impact to the hospital's core values of safety, responsibility.
The fire detection and response systems are tested as scheduled, and the results forwarded to the EOC Committee quarterly.	Met	The Campus Fire Alarm system serving SFGH is routinely maintained, tested and repaired as necessary.
Summaries of identified problems with fire detection, NFPA code compliance, fire response plans, drills and operations in aggregate, are reported to the EOC Committee quarterly.	Met	Any problems or deficiencies of the fire alarm system are reported in the quarterly Environment of care (EOC) report.
Fire Prevention and Response training includes the response to fire alarms at the scene of the fire alarm, critical locations of the facility, the use of the fire alarm system, processes for relocation and evacuation of patients if necessary, and the functions of the building in protection of staff and patients.	Met	All fire drills required for the facility have been conducted per schedule. Staff training in response and system devices are covered as part of the drill.
Fire extinguishers are inspected monthly, and maintained annually, are placed in visible, intuitive locations, and are selected based on the hazards of the area in which they are installed.	Met	Fire extinguishers are inspected regularly, and as required. All extinguishers are appropriate to their use and location. The number of fire extinguishers on campus has grown due to the new hospital.
Annual evaluations are conducted of the scope, and objectives of this plan, the effectiveness of the programs defined, and the performance monitors.	Met	Items monitored in the annual report and fire drills are assessed for effectiveness and improvement.

PERFORMANCE METRICS

Life Safety Management Performance Metrics	2016 3rd Qtr.	2016 4th Qtr.	2017 1st Qtr.	2017 2nd Qtr.	Target	Comments and Action Plan
Quarterly Fire Drills; a minimum of 6 per quarter - one fire drill per shift, w/ completed department evaluation forms.	7	11	10	10	Minimum of 6 drills per quarter; 2 per shift	Target achieved; extra drills due to interim life safety measures. Discussed issues uncovered during drills and took corrective actions.
False fire alarms	0	4	10	10	5 or less false alarms per year	Target not met - monitor for trends. Extend false fire alarms goal at less than 10 for the year.
Post Drill knowledge test score	99%	99%	99%	99%	95%	Test scores exceed target expectations for emergency response procedures. Reflect that staff understand proper emergency response procedures.

Aim: For FY 2017-18, false fire alarms on campuses extended to 10 per year or fewer.



Target of five or less false fire alarms for FY 2016-17 has been not been met.
The rise in false fire alarms is directly related to Bldg 25.

EFFECTIVENESS

The Life Safety Management Program is effective, but needs improvement based on the objectives and performance metrics indicated in the Plan.

GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2017-18

- Monitor and manage false fire alarms for a quality and safe care experience in Bldg 25. This can be accomplished through staff education, training, and engagement.
- Monitor ILSM for on-going construction projects within Bldg 5 and integration with Bldg 25. File the appropriate Risk Assessments for a quality, and safe care experience.
- Continue planning fire alarm upgrade funded by the 2016 bond.
- Continue train Hospital staff on safety equipment, fire plan, and fire life safety systems in Bldg 25.
- Engage staff and contractors to implement projects funded by the 2016 bond measure.

Proposed Performance Metrics for 2017-18	Target	Comments and Action Plan
AIM: manage and reduce false fire alarms in Bldg 25 to a more acceptable level through staff training.	**10 or fewer false fire alarms per year.**	Implement staff trainings on the fire alarm system in Bldg 25.
AIM: Engage staff and contractors to review & implement the 2016 bond measure projects pertaining to the fire alarm system.	**Provide ZSFG staff oversite for all projects.**	Involve stake holders in project implementation.

UTILITY SYSTEMS MANAGEMENT

SCOPE

The Zuckerberg San Francisco General Hospital Facility Services Department implements and maintains the Utility Management chapter of the Environment of Care. The Utility Management Program ensures the operational reliability and assesses the special risks and responses to failures of the utility systems which support the facility's patient care environment. The major utility systems include but are not limited to: electrical distribution, domestic water and waste systems, vertical transportation, communication systems, HVAC, and medical gases.

ACCOMPLISHMENTS

- Completed Phase I of seismic upgrade to Bldg 2 (Power Plant).
- Completed overhead speaker system upgrade in Bldg 25.
- Completed ADA bathroom projects in Bldg 5 on 7^{th}, 6^{th}, 5^{th}, 4^{th}, 3^{rd}, and 2^{nd} floors.

PROGRAM OBJECTIVES FOR FY 2016-2017

Objectives	Met / Not Met	Comments and Action Plans
The hospital maintains a written inventory of all operating components of utility systems or maintains a written inventory of selected operating components of utility systems based on risks for infection, occupant needs, and systems critical to patient care (including all life support systems.)	Met	Inventory of equipment for major utility systems maintained in equipment database.
The hospital identifies, in writing, inspection and maintenance activities for all operating components of HVAC systems on the inventory	Met	Documentation of activities is entered into the automated work order system.
The hospital labels utility system controls to facilitate partial or complete emergency shutdowns.	Met	Utility isolation information located at the Engineering Watch Desk.
The hospital inspects, tests, and maintains emergency power systems as per NFPA 110, 2005 edition, Standard for Emergency & Standby Power Systems.	Met	Testing and inspection of this new system per NFPA 110, 2005 edition
The hospital inspects, tests, and maintains critical components of piped medical gas systems, including master signal panels, area alarms, automatic pressure switches, shutoff valves, flexible connectors, and outlets. These activities are documented.	Met	The medical gas system is certified annually. Area alarm panels are checked monthly. Documentation is provided by separate report.
Annual evaluations are conducted of the scope, and objectives of this plan, the effectiveness of the programs defined, and the performance monitors	Met	Scope and objectives derived from quarterly report data.

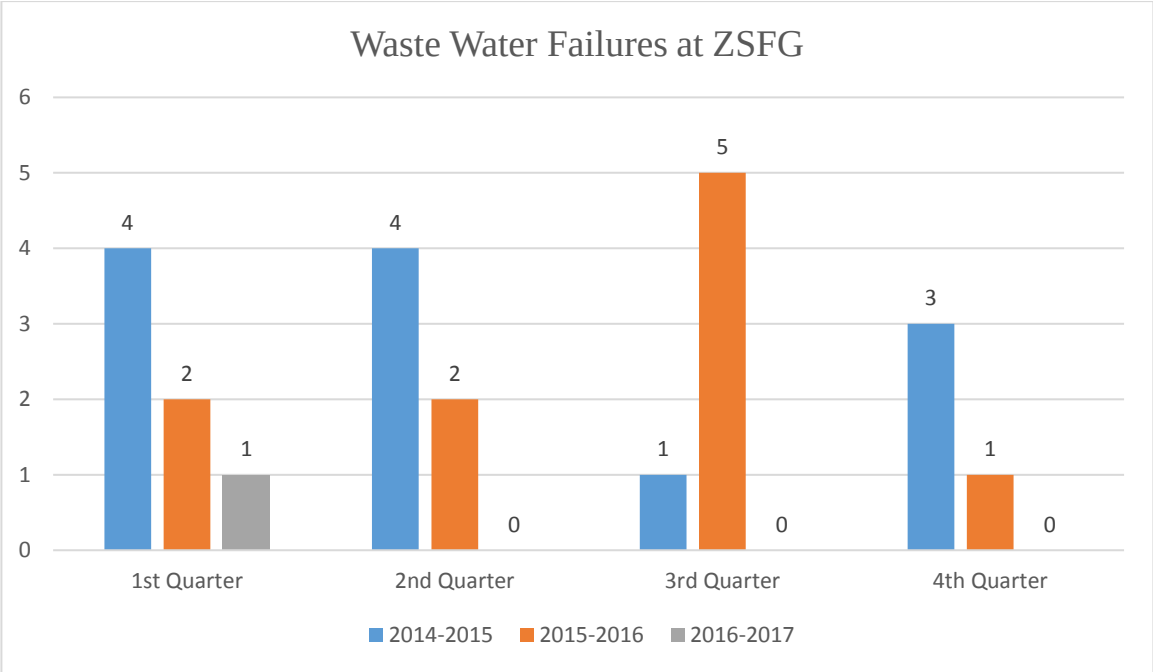
Report Indicator	FY 2016-2017 Totals					
Systems	**5**	**25**	**80**	**90**	**100**	**SB**
Emergency Power Failures	0	1	0	0	0	0
Commercial Power Failures	0	0	0	0	0	1
Water System Failures						
Domestic	0	2	0	0	0	0
Waste	0	1	0	0	0	0
Communication Failures	0	0	0	0	0	0
HVAC Failures	0	0	0	0	0	0
Med Gas Failures	0	0	0	0	0	0
Elevator Failures	11	32	0	1	0	0
High Voltage Electric Switchgear	0	0	0	0	0	0

The Environment of Care Committee has evaluated the objectives and determined that they have been met. The Program continues to direct utilities management awareness in a proactive manner.

PERFORMANCE METRICS

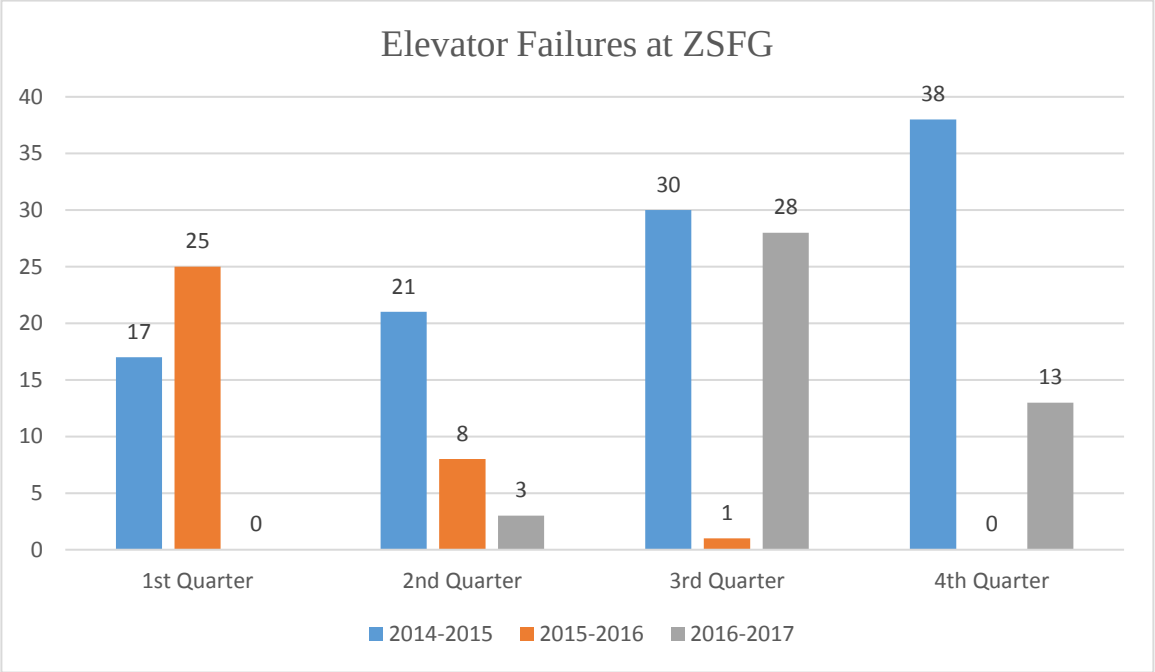
Waste Water Failures

AIM: For FY 2016-17, to reduce by 25% the number of waste water utility system failures was met. Going forward this system will go to a watch metric rather than report metric.



Elevator Failures

Elevator Failures	1st	2nd	3rd	4th	Action
Elevator outages of 4-hours plus in duration, or passenger entrapment of any duration, (33 total cars)	0	3	28	13	Monitor for trends



AIM: For FY 2017-18 improve overall elevator performance by having one, unified elevator contract with a dedicated elevator mechanic on campus during business hours Monday-Friday.

EFFECTIVENESS

The Utility Management Program is considered effective.

Proposed Performance Metrics for 2017-2018	Target	Comments and Action Plan
AIM: manage elevator failures at ZSFG to a minimum through contract unification	**25% reduction from 2016-17 level.**	Work with Real Estate Department to unify elevator contracts so that there is an elevator technician on campus M-F, 8AM to 4PM.
AIM: Engage staff and contractors to review & implement the 2016 bond measure projects pertaining to the utility system.	**ZSFG staff engaged in all project work.**	Involve stake holders in project implementation.

GOALS AND OPPORTUNITIES FOR IMPROVEMENT IN 2017-18

- Work with project management to develop a replacement project for the absorber chillers in Bldg 2. Currently, the chillers require a high level of maintenance and repair to provide a quality cooling to Bldg 5.

- Work with project management to develop a replacement project for the cooling towers that serve the chillers in Bldg 2. Currently, the cooling towers require a high level of maintenance and repair to provide cooling for the chillers.

- Work with project management to develop a replacement project for the main switchgear in Bldg 5. Currently, the system requires a high level of maintenance and repair to provide a quality and safe electrical distribution system.

- Work with project management to replace the roof on Bldg 5. Currently, there are a number of leaks that cannot be easily patched.

- Continue training hospital staff on utility systems, including elevators, electrical distribution, water/waste, pneumatic tube, and medical gas systems for Bldg 25.